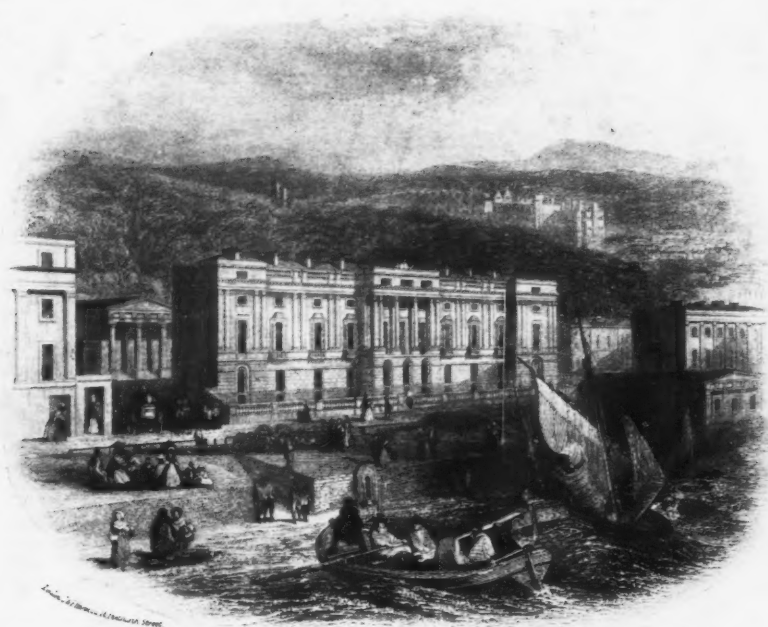


OCT 13 1941

THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration



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September 1941

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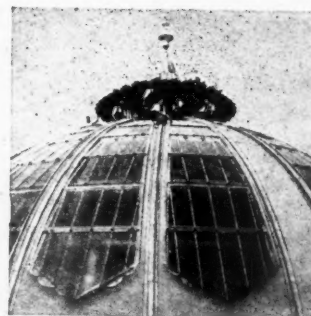
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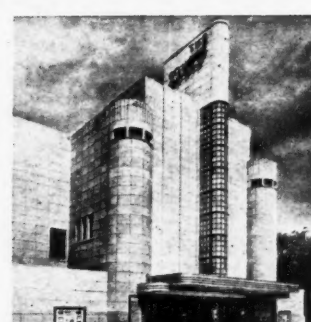
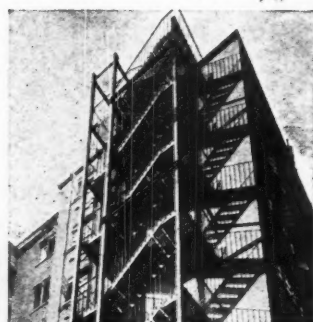
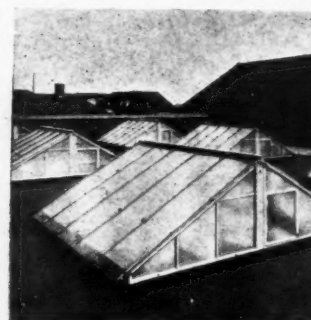
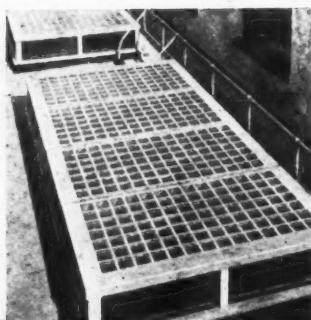
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"A close relation between form and function," writes Mr. Andrew Boyd on page 76, "has been noticed before in Indian and Singhalese architecture. In such buildings as these poverty has still more conditioned an essentially utilitarian basis, and this is the source of the originality of some of the resulting forms and also the reason why such an architecture can be flexible enough to make new forms to suit

new structures and new functions. The æsthetic which has, consciously or unconsciously, developed in them is based on *differentiating*, *simplifying* and *emphasizing* the component parts of the structure and their functions, and has a striking affinity with the æsthetic which modern architecture has developed." The photograph is of a village shop in the process of completion.

F O R M A N D F U N C T I O N





1, the simplest form of peasant hut in a typical setting.

A People's Tradition

By Andrew Boyd

THE small building tradition illustrated here is a minor episode in the long and rich history of Ceylon art, but it has the interest of being alive, when most of the other traditions have come to an almost complete stop. Houses of the kind illustrated are to be seen all over Ceylon, particularly in the western and southern parts. They are still being built, in diminishing numbers and elaboration, by peasants and small shopkeepers, and the tradition is even being adapted with vitality to new types of building.

This surviving tradition reflects the continued existence of the peasant class in Ceylon; it reflects to some extent the history of this class alongside of foreign occupiers and settlers; and it also reflects its present unhappy and deteriorating condition. The aesthetic value of this tradition, which is derived from its structural and functional directness, points, by contrast with the bulk of more expensive but unsuitable and aesthetically insignificant architecture current in Ceylon, to the spirit in which the new materials and potentialities which modern civilization has necessarily introduced *could* (given the social opportunity) be used to develop an architecture that would be both genuinely modern and genuinely of the country.

Ceylon was, from the fifth century B.C. and probably before, a part of the great continental civilization of India. Its culture has centred round Buddhism, which in India itself was eventually ousted by the Brahmanism it had arisen to reform; but it was also subject to Hindu influences from South India. So its architecture was a part of Indian architecture—in earlier times an integral and important part, later a more isolated and provincial part. Temple buildings and *dāgas* at Anurādhapura

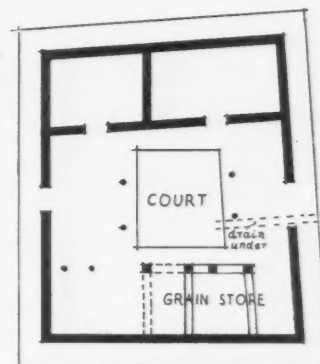
(200 B.C.—A.D. 800) were comparable with any in India, but by the sixteenth century Ceylon culture was already in comparative decline, together with the power and wealth of the Singhalese monarchy, and was then further assailed by first Portuguese then Dutch encroachments in the sixteenth and seventeenth centuries. The foreigners occupied most of the coastal areas, and the Singhalese kingdom dwindled into the interior.

Following the reduced fortunes of the kings and semi-feudal nobility, the fine stone tradition fell into disuse, but a court, temple, and peasant architecture of wood, lacquer, brick, mud, tiles and thatch continued and flourished. The photographs on page 74 are of a temple building in the Daladā Māligāva at Kandy (eighteenth century), and show several characteristic features, the two-slope roof (the change in pitch arises from structural independence between a main roof and a roof over an attached verandah), the carved rafters and wide eaves, the balcony with brightly-coloured lacquered balusters, 6 and 7, shows a later Kandyan temple building, and 8, a preaching hall and rest house probably dating from the end of the Singhalese period.

One is apt to overlook the fact that Indian architecture not only began as an architecture of wood and other perishable materials (stone began to be used about the third century B.C.), but also that those materials continued always side by side with stone. In the famous "Brazen Palace" at Anurādhapura, a nine-storied monastery building, only the ground-floor columns (which remain) were of stone, the upper storeys being of wood. Needless to say, a wooden architecture can be, and from many indications and survivals evidently was, both massive and magnificent. Domestic build-

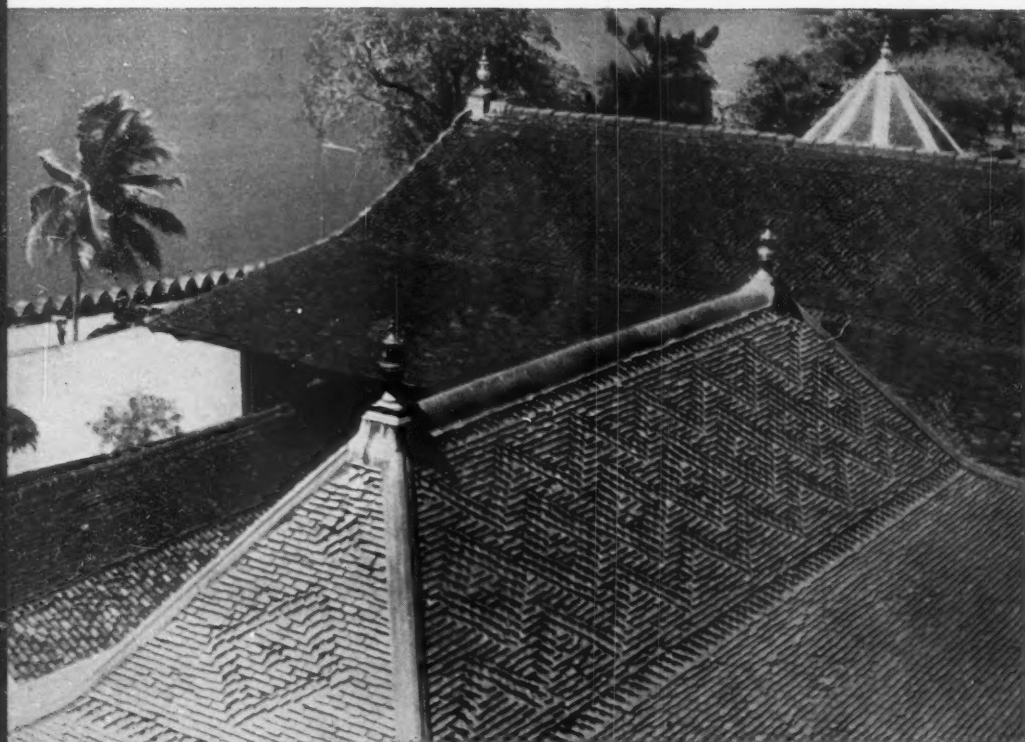
ing in India and Ceylon seems always to have been of perishable materials. A reference in Indian literature to "cities abounding in white houses" indicates lime-plaster as today. By the seventeenth century, in Ceylon, sumptuary laws forbade the common people to plaster their houses, and the poorest houses remain unplastered today; but the landlord's manor, the rest house, the temple buildings, and the palace were plastered, and sometimes painted as well (3).

Typical plan of a "small yeoman's" house of the eighteenth century and earlier. Reproduced from "Medieval Singhalese Art," by A. K. Coomaraswamy (Essex House Press, 1908).



The plan above, taken from Coomaraswamy, is a typical plan of a "small yeoman's" house in the eighteenth century and earlier. In its courtyard form it is similar to plans from other parts of India.

In 1705 the Dutch possessions were ceded to England, and in 1815 the English conquered the rest of the island from the Singhalese. Colonization in the English period has probably been better than any before in promoting cultural decay and disruption in subject peoples. The subordination of the Singhalese ruling class—



2



3



4

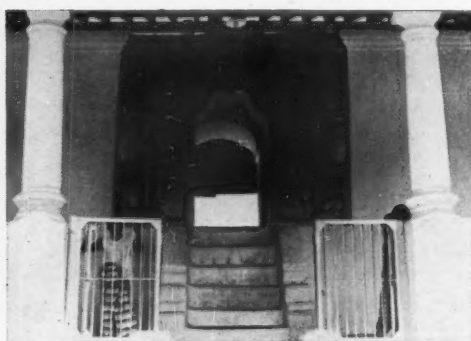
Part of the historical background of the popular tradition: Court and temple architecture of the late mediæval period. 2, 3 and 4, details of an early eighteenth-century Singhalese temple building in the Daladā Māligāva at Kandy; 2, roofs with flat Kandyan tiles laid in patterns. Note the typical break in the slope of the roof which derives from the rafters of the main roof being distinct from those forming the roof of an attached verandah. The finials are gilt; 3, the first floor showing the painted walls, wall-plate on corbels, carved rafters with central tie and turned and lacquered balusters. The usual colours of Singhalese lacquer are red, yellow and black; 4, the ground floor columns with cantilever brackets supporting the balcony above.



5



6



7

5, the stone and plastered seventeenth or eighteenth century Buddhist temple of Lankātilaka near Kandy. 6 and 7, a Buddhist temple building near the Māligāva, Kandy, and a detail of the doorway. The doorway is painted in brilliant colours, mostly reds and yellows, which contrast with the white plaster. This is an eighteenth-century building, but the columns are of obvious European derivation and may be of later date.

never very rich—meant the destruction of their organization of State-craftsmen, a great decrease of building, and soon the imitation of foreign forms, for the richer Singhalese in the nineteenth



8, a Buddhist preaching hall, probably of the early nineteenth century, consisting of a main hall and an attached porch used as an ambalam or rest-house. Photograph by courtesy of Lionel Wendt, Esq., of Ceylon.

century went in for imitating European ideas and manners, while the English-imposed educational system completely ignored national history. The Singhalese cultural tradition therefore passed out of the hands of the "upper" classes and lived on only among the common people. It is important to remember, however, that the common people had always had arts—building, poetry, dancing—of their own, a distinguishable branch of the dominant tradition, and it is this branch, modified in its course by the new history of these people as a neglected and declining peasant and small shopkeeper class under foreign rule, that we see in the houses which are the subject of this article.

The prototype of most of the one-storey ones illustrated is a simpler plan than the Kandyan courtyard house, which has not survived in common use. It is the one-roomed and two-

roomed hut of the poorest peasant in the fields which has been developed with more or less finish and elaboration according to the means of the occupants.

The ordinary peasant's house was always built by himself and his family and not by professional craftsmen. This has probably been important in determining the form it took. The materials, the climate, and the purposes of these houses have had an obvious and more than usually direct influence on their form. What were these?

The materials of the simplest cottage were and are a raised mud foundation, a bamboo framework lashed together (not nailed). The framework for the walls is double, and into the space between the members clay-mud is rammed in the form of balls. The roof is thatched with paddy (rice) straw or covered

with woven coconut-palm leaves, *cajan*. The palm leaf (some six feet long) is left with its spine intact and the fronds or strands on both sides are plaited together, forming a sort of standard roofing-sheet of excellent insulation value.

For sheds and outhouses it is used for walling as well, also as fencing material. In more expensive types of building solid walls—of cabook, or stone and mud, or occasionally brick—replace the bamboo framework, lime-plastered and whitened; solid timber replaces the bamboo roof; tiles replace the thatch. Timber screen walls of lattice are common. Panelled doors are, by a very common and attractive custom, painted bright blue and white, the stiles and rails and centres of panels being blue.

What are the climate and the way of life that helped to mould the forms of these houses? Tropical sun combined with tropical rainfall dictated the open verandahs, the balconies, the sloping roofs, the generous eaves. And climate, civilized custom and poverty

at once contributed to dictate a great simplicity in ordinary life, especially, of course, among the peasants, and made it possible without much discomfort. The ground was used more than chairs, mats than a bed. A leaf was your plate, and a few yards of cotton were your everyday clothes.

As many of the Singhalese had lived in the proximity of European settlers a century and more before 1815, European, probably Dutch, influences on some of both the one- and two-storied types are obvious. They can be seen in 9. 18 is slightly outside the tradition we were considering here, but is an interesting example of this local tradition, combined in a singularly happy and natural way with Dutch baroque forms. It is typical of the kind of town house the Dutch had built, unquestionably by native craftsmen, in their forts, such as Galle. The round arches, the tall doorways and their architraves are clearly Dutch, the columns seem to have at least some Ionic ancestors; but the balcony is, of course, typical of India and Ceylon; and of the curly side-wall (subtly echoed in form by the wooden balustrade above) it is hard to say whether it is more characteristic of the native or the baroque. It is certainly reminiscent of the curving balustrades to the steps of ancient temple buildings.

The other upstairs examples have mostly shops on the ground floor. Sculptured pictures, from Sāñcī (first century B.C.), of early Indian buildings, themselves long ago disappeared, show some striking resemblances in general form to these—the open treatment of the

ONE-STOREY



9, 10

11, 12

Examples of two- and three-roomed cottages of the plan types shown on the left. Developed from the simplest one-roomed, but they are built with more or less durable materials and with greater or less finish according to the means of their occupants. Thus Nos. 10 and 11 are roofed with *cajan*, Nos. 9 and 12 with tiles. The walls are of mud or cabook, a stony subsoil cut up into blocks about 2 feet by 1 foot by 9 inches. No. 9 illustrates the characteristic method of emphasising door and window panelling with bright blue paint, and also in details such as the verandah column and pilaster, the European influences among which this tradition, offshoot of an art 2,000 years old, developed. Peasants' cottages were almost invariably built by themselves and not by professional craftsmen, a fact which has probably contributed to their clear and straightforward character. Well-kept examples have naturally been chosen for illustration, but very many of these cottages are now dilapidated and neglected, reflecting the increasingly depressed economic position of the peasantry.

TWO-STOREY



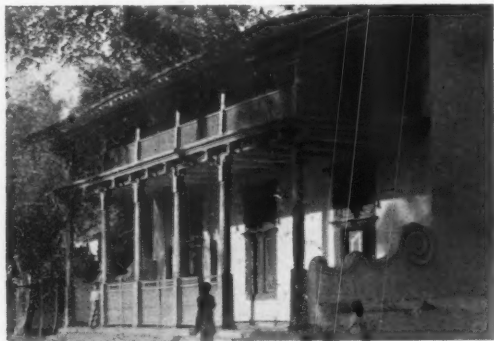
13, 14

15, 16, 17

Two-storied structures are usually shops with living rooms above, the general form given by the colonnaded shop below and the narrow balcony above being remarkably like that of Indian buildings of the first century B.C. as indicated by surviving sculptures. Tiles are more frequent as roofing material here, and brick is sometimes used for walling. The striking building form in No. 13 is an upper storey providing a well ventilated and protected loft. Note the happy use of ordinary trellis work in the ventilation opening and on the balcony balustrade. No. 15 is a detail of a balcony. It is made of cheap boarding, but the fretwork pattern illustrates the decorative genius of Indian traditions. In No. 16 the balcony is solid and formed of diagonal weather-boarding. No. 17 shows the usual panel treatment reversed. Both in one- and two-storied structures side walls are kept solid and comparatively blank, while back and front walls are treated in contrast openly, with verandahs and screen walls, frequently of some form of lattice.

shops below and the pillars supporting the narrow balcony above. Thus this common people's building continues the ancient tradition after the grander structures have ceased to be built. The frontispiece, for example, is a quite new village shop. It is noticeable that it is very plain. The carving and display of craftsmanship are becoming rare. Very many of the older houses are now terribly dilapidated. 20 shows this tradition adapted to a new building type, a row of tiny urban tenements. This building also had just been completed when photographed. The living standards are deplorable, but within those limitations the formal treatment—and with no tuition from modern architecture—is highly satisfactory.

I have already said that the peasant and small shopkeeper class is declining. In the



18. Typical of the town houses built by the Dutch, this building shows the fusion of Singalese tradition and craftsmanship with Dutch baroque details.

great epochs large tracts that are now jungle were irrigated and cultivated with rice. By the time of the Kandyan kingdom they had been abandoned, but the country was still self-supporting. Now the bulk of the rice consumed has to be imported. Three processes have contributed to this: enclosure of

land for tea, rubber and cocoanut estates; the neglect of agriculture by the Government and its concentration on the interests of the tea and rubber industries, which are almost wholly controlled by English capital; the consequent drawing-off of impoverished peasants to become wage-labourers on rubber and cocoanut estates. The Singalese do not provide all the wage-labour necessary, however. The tea estate labourers are almost all immigrants from South India. And their dwelling-houses—rows of company-owned, iron-roofed "coolie lines" (access to which, incidentally, is subject to the company's approval) show grimly enough by comparison with the independent peasant's cottage, with all its deficiencies, the lowered status of the wage-labourer under full colonial conditions.

Other contrasts are presented by the current building styles of the Government, the big companies, the rich investors in house property, and the speculative builders, which vary from straight "classic" through a variety of "harmonious blends of east and west" to the peculiar jazzy zigzags of the go-ahead jerry-builder. Almost all these—and not least the attempted revivals of Singalese forms (wrapped round steel stanchions)—fail, glaringly, either to carry on any native tradition or to lay the foundations of a new contemporary tradition, because they are not based upon any serious and consistent ideas, whether structural or æsthetic or social, but are merely an arbitrary juggling with forms and fashions.

The refreshing and attractive quality of the cottage buildings illustrated here, though very little noticed in Ceylon, suggests how these two aims could—at least on the formal side—be realized. The native tradition cannot be "carried on," where both the life it served had disappeared and its structural system superseded. Attempts to "revive" it, then, whether by sincere nationalists or placatory authorities, will naturally be futile. But the principles which give it its value *can* be applied to the

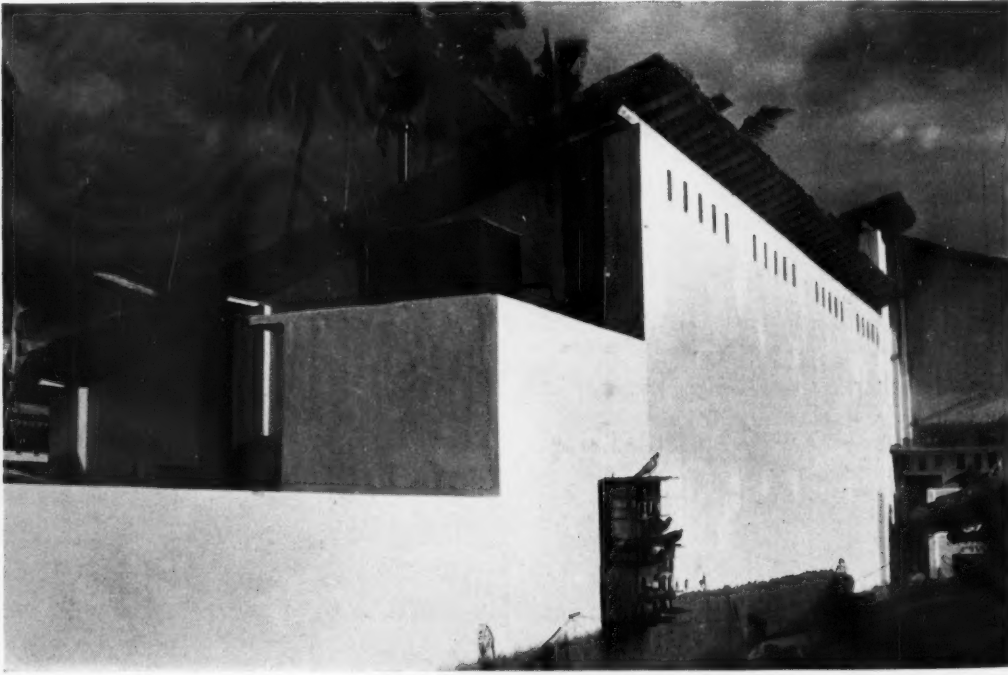
social, structural, and climatic conditions of the present. Many of these have changed, some of them have remained the same. And if these principles are applied imaginatively an architecture will result which, while being different from that of the past, will be an extension of it; and the only healthy kind of continuity will be achieved.

For in what does the value of these buildings consist? A close relation between form and function (and this, of course, applies to the most elaborately decorated work as well as to the plain) has been noticed before in Indian and Singalese architecture and woodwork. In such buildings as these poverty has still more conditioned an essentially utilitarian basis. This is the source of the originality of some of the resulting forms (such as those in 13), and also the reason why such an architecture can be flexible enough to make new forms to suit new structures and new functions. And the æsthetic which has, consciously or unconsciously, developed in them is, I suggest, based on *differentiating, simplifying, and emphasizing* the component parts of the structure and their functions, and has a striking affinity with the æsthetic which modern architecture has developed.

How is such an architectural renewal to be achieved? The usual prescription is architectural education—the importance of which is undeniable. But architecture is of all the arts the most obviously connected with social needs and conditioned by social structure. Just as it would be unconvincing to attribute the present unsatisfactory state of affairs merely to technical or educational causes, so it is useless to expect a cure along these lines alone. In the renewal of architecture nothing less than a renewal of the entire national and cultural life is involved. But whether this is possible in conditions of colonial dependence, and if not, on what economic and political changes it depends, are outside the scope of this article.



19



20

The common people's building, having survived the disintegration of the main tradition, adapts itself to new but reduced conditions. Together with the decline of the peasantry goes the growth of the wage-earning class and the appearance of slums. 20 is the back view of urban workers' tenements. Living standards are deplorable, but the formal treatment remains satisfying, and suggests a solution to one side of the problem of refounding Ceylon architecture.



AGRICULTURAL COLLEGE

ERIC MENDELSON

GENERAL—This building is the post-graduate college of the Hebrew Universities Agricultural Faculty at Rehovot in Palestine, to which, after two years' studies in Jerusalem, students will be transferred for the completion of their practical training.

I, a detail view of the college from the south.

CURRENT ARCHITECTURE



2



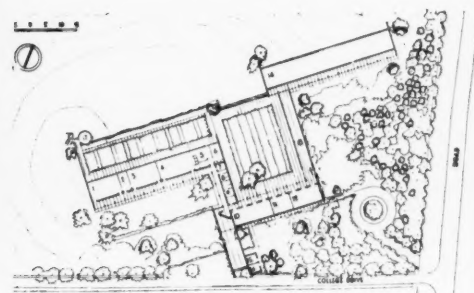
3

AGRI- CULTURAL COLLEGE

ERIC MENDELSON

KEY TO LAY-OUT PLAN

- 1 and 3. Biology laboratories.
- 2 and 5. Preparation rooms.
- 4. Chemistry laboratory.
- 6. Lecturer's room.
- 7 to 9. Store and cloak rooms.
- 10. Library.
- 11 and 12. Lecture rooms.
- 13. Future pergola.
- 14. Future extension.
- 15 and 16. Engine rooms.
- 17. Existing water-tower.



4

SITE—Situated on the main road between Ramleh and Gaza, the college is surrounded by the experimental fields of the Agricultural Station.

PLANNING—Provision has been made for biology and chemistry laboratories, a library, lecture rooms, preparation rooms, store and cloak rooms, and an engine house. Space has also been reserved for the extension of the building at some future date.

CONSTRUCTION—The building has only one floor, the founda-

tions, walls and ceilings of which are carried out in reinforced concrete. Externally the walls are finished with a surface partly cement-rendered and partly granulated. The pitched roof is covered with red burnt tiles, and the lower side of its projecting portion is encased in impregnated deal boards.

2, from the south, showing the laboratories, lecture block and engine house. 3, from the south-east, a view of the laboratory- lavatory- and lecture-blocks. 4, the open corridor in front of the laboratories.

CHURCH

EDWARD MAUFE

GENERAL—The church is dedicated to St. John the Evangelist, and accommodates approximately two hundred persons.

SITE—On the outskirts of the village of Hook, Hampshire, within a curve of the main Basingstoke Road. The tower of the church is placed at the axis of the curve. The church is designed to give the appearance of good silhouette mass from all points on the curve.

PLAN—The plan is simple: the nave and chancel in one line, correctly orientated, and the vestry and entrances on the road side approached from a car park. The tower serves four practical purposes: in the basement is the heating chamber, at ground level the entrance to the vestry, above it the organ chamber, and above that the ringing chamber and the bells. The balcony to the tower is used for taking in the bells.

CONSTRUCTION—Exterior walls, local Daneshill bricks; roofs, hand-made sand-faced tiles. The entrance to the church is by a lead-roofed porch with a cast lead frieze bearing in gold the lettering *Venite Exultemus Deo*, with a cable pattern above and below it. Windows, oak; balcony to tower corbelled brickwork with an oak balustrade. Surmounting the tower is a wrought-iron gold cross and at the base a pedestal to support a stone figure of St. John. The figure, shown in the drawing of the north elevation below, is needed to complete the composition.

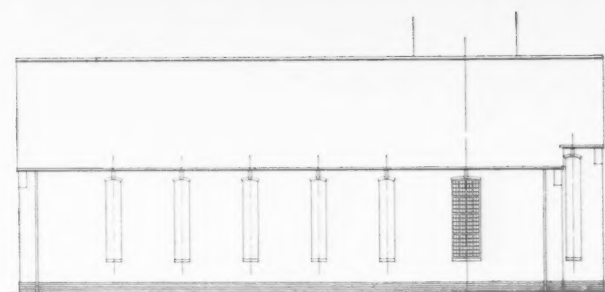
INTERNAL FINISHES—Walls, white brickwork treated with ivory slurry. Above the altar is a painted tester of counter-changed panels depicting the Eagle of St. John the Evangelist and the Arms of the Diocese of Winchester, all in gold and red on an azure field. This azure colour is continued over the ceiling of the chancel, but the ceiling of the nave is left in the natural colour of the acoustic boarding. Tie-beams are green. Floors are: nave, beechblocks; floor and steps of chancel, travertine. Chairs, beech; font, Douling stone. The pulpit and lectern are both built into the main structure and are in cream-coloured brickwork,

[continued on page 80]

1, a detail view of the tower. 2, the north front.



NORTH ELEVATION



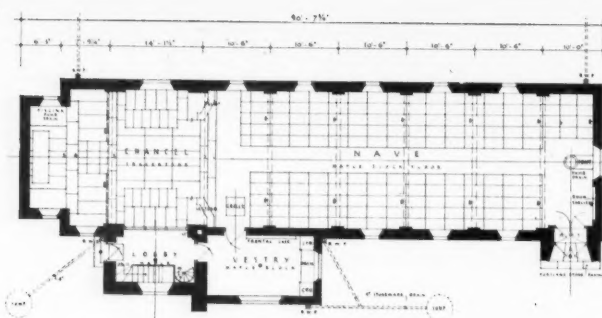
SOUTH ELEVATION

CHURCH

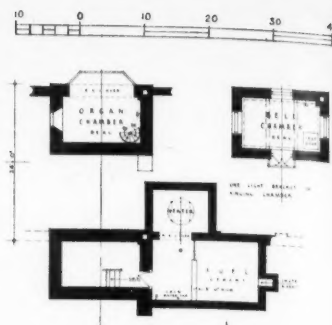
EDWARD MAUFE

capped with Doulting stone. Pipeless heating is installed. The lighting fittings are fixed on the tie-beams and cast the light eastwards. All the furniture, including the lighting fittings, were designed by the architect.

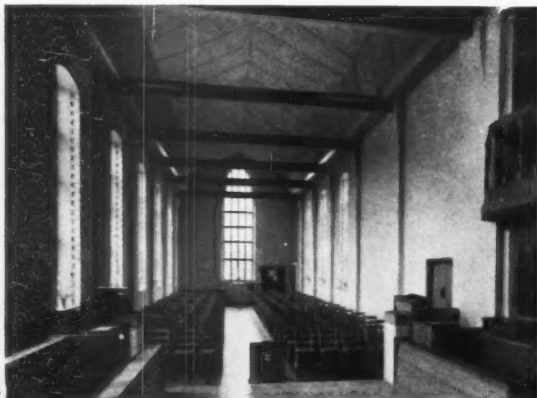
3, looking west from the chancel. 4, looking east. 5, the chancel.



GROUND PLAN



BASEMENT



3, 4



5

FACTORY

T. A. PAGE, SON AND BRADBURY



GENERAL—New buildings for the manufacture of paint built for Messrs. J. Dampney and Company of Newcastle, to replace a miscellaneous collection of old ones, and divided into sections with fire doors on each floor. The yard is laid out for one-way traffic; six loading docks; and five lifts, having a capacity of from one to two tons each.

CONSTRUCTION—Reinforced concrete frame; reinforced concrete floors to take a load of $3\frac{1}{2}$ cwt. per ft. super; foundations, reinforced concrete grillage; walls, 11 in. cavity; rustic facings, carried on floor projections forming lintols over windows. The windows and fire doors are of special rustproofed metal; internal walls, 9 in. brickwork; roof, reinforced concrete slab with built-up three-ply asphalt roofing.

THE ARCHITECTURAL REVIEW SUPPLEMENT

SEPTEMBER 1941

DESTRUCTION AND
RECONSTRUCTION



Three-Dimensional Town Planning

By Aileen and William
Tatton Brown

This is the first of two articles dealing with some principles of town planning, the application of which will be discussed in a subsequent issue,

Town planning is still often spoken of as if it were just large-scale architecture. Planning, for technical reasons set out later, involves large-scale architecture, the design of districts as opposed to the design of individual buildings; but the work of the planner and the work of the architect are quite separate and distinct. This distinction has not yet been sufficiently realized because we still tend to think in terms of the Beaux Arts tradition whose exponents made the first efforts at large-scale planning, laying out streets and districts on the same principles as they had laid out parks and gardens—in geometrical patterns designed to emphasize the magnificence of Le Roi Soleil.

Town planning is not really an art: it is an abstract science, the purpose of which is not primarily to create effects, but to establish a correct numerical and spatial relationship between the various elements that compose a town—open spaces, buildings and services—so that the whole is properly balanced and capable of working efficiently. It is possible to have a thoroughly efficient and well-planned town that is architecturally negative. But it is no longer possible to have a well designed and beautiful town that is unplanned, because our resources are no longer unlimited and in the absence of planning such congestion results that there is no room for architecture. It is the duty of the planner to tabulate resources and requirements, and then after striking a balance between human and economic needs (not using the words in the narrow technical sense, but in the wide biological sense) to formulate a pro-

gramme in abstract quantitative terms, leaving to architects the greatest possible freedom of choice that is consistent with efficiency. It is the job of the architect working within these regulations to achieve quality.

It is the aim of this article to point out the scope of the planning problem in towns rather than to provide an architectural solution, to indicate a method of approach rather than to present a completed scheme. The type of district to which this particular discussion applies is a commercial and small-scale industrial area (with shop as opposed to factory) in a large town; a parallel in existing London is the Borough of Finsbury. This type of district has been chosen because here the need for planners to achieve standards of efficiency as opposed to standards of amenity is most marked, and the break with the Beaux Arts tradition is correspondingly obvious. Traffic is one of the main problems dealt with because the disorganization of traffic is one of the most noticeable of the inefficiencies from which we suffer at present. An attempt is made to show how closely the design of services, of which roads are merely the chief, should be related to regulations governing the size and placing of buildings, and how these regulations in turn must be related to those dealing with the provision of open spaces, the depth and height of buildings and the observance of angles of light. It is useless to tackle these problems in isolation as was done by the Bressy Report, because a solution depends upon establishing a correct relationship and maintaining

it, rather than achieving any fixed standard.

It is equally useless to attempt to solve them by detailed regulations relating to individual buildings because the necessary space can only be gained and the necessary group facilities provided by dealing with districts as a whole. By-laws of the old type destroy architecture without achieving planning.

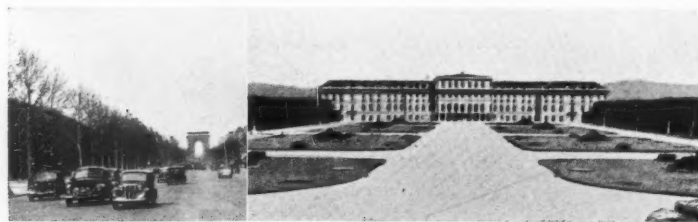
The present lack of distinction between planning and architecture is perhaps due to the fact that the movement in favour of planning comes chiefly from architects, who find themselves unable to continue their own work in the absence of proper planning.

It is, however, very dangerous to ignore the distinction because, although the same people may be able to do the work of both planners and architects, it is not possible for them to do both types of work simultaneously. Statistics are the raw material of the town planner; bricks, steel and concrete are the raw materials of the designer. The former is concerned with averages, the latter with particularities.

The science of town planning is one that can scarcely be said to exist yet. It is a matter of desperate urgency that general principles should be established, terms clarified, and the scope of the subject agreed upon. It is difficult to set up planning authorities without first understanding clearly what they are to do. The great need of the moment must be the excuse for publishing ideas and suggestions that are not fully worked out.

Death of the Beaux Arts Tradition

GOOD street architecture is impossible until the traffic problems connected with urban areas are clearly and satisfactorily solved, for buildings cannot be designed in isolation and without relation to their surroundings, or to the people who look at them. Bishop Berkeley's assertion that nothing exists except in relation to an observer may be questionable. But no one can quarrel with the statement that architecture cannot exist without the possibility of being seen. Disorganized motor traffic, overrunning all the spaces between buildings with tumult and mechanical confusion, cuts us off from the possibility of good architecture as surely as it limits our consciousness of our surroundings to hasty glimpses round the backs of buses and at an oblique angle. The Lutyns



There is still scope for the Beaux Arts planning, but not in connection with the design of roads and services. The beauties of monumental planning can only be appreciated if motor traffic is kept right out of the picture.

façade of Hereford House, for example, considered as a piece of architecture, simply does not exist.

The monumental layout of Paris is slightly better in this connection than the layout of London; but only very slightly. The grandeur and dignity of the Arc de Triomphe is almost, if not quite, destroyed by the motor vehicles whizzing round its base; for twentieth-century traffic makes nonsense of monumental conceptions designed to be seen from the road. Roads should be designed to carry motor traffic at an average speed of about 40 m.p.h. They are no place for loiterers, seeking to enjoy at leisure the glories of axial planning. Roads in Sir Christopher Wren's day were part of architecture; they formed the framework and setting for buildings; they were merely an extension of the garden layout that was designed to emphasize and enhance their aesthetic value. The architecture of roads and buildings are still closely related to each other—perhaps more closely than before—but the relationship is now a quite different one. Roads have passed over into the category of "services." Attention previously given to the architectural quality of roads might well be concentrated now on parks and pathways where human needs, aesthetic as well as physical, dictate the plan, and compromise with machines is unnecessary.

The Structure of Towns

Very little is known about the structure of towns at present. Any final solution must be based on a body of research that does not exist. It is necessary to know what the relationship

is at present between

- (1) floor area served;
- (2) area devoted to traffic under the following heads: through traffic, stationary vehicles, pedestrians;
- (3) open space;
- (4) waste space;

on a given acreage of land; in order to determine accurately the extent of the faults which must be remedied.

The following analysis, however, gives a rough idea of the nature of the deficiencies, and the type of solution which must be attempted.

TRAFFIC AND ITS REQUIREMENTS

Once it is recognized that motor roads are merely one of the essential services necessary in a modern town, analogous to gas, electricity, drains, refuse disposal, etc., it becomes easier to approach the problem of how they should be designed. They should be designed in town to give the same efficient service as is provided in the country, where the road engineer is in complete control of the situation. This implies drastic reforms based on an analysis of different kinds of traffic and their requirements. The steps necessary to convert our present street pattern into a system suitable for motor traffic are shown diagrammatically on page 84.

Pedestrians

The contrast between an *Auto Strasse* and Bond Street is a measure of the inadequacy of our present towns. Motorists and pedestrians still meet on terms of equality, and the result is delay and frustration for the former, death and injury for the latter. H. Alker Tripp, Assistant Commissioner of Police, Scotland Yard, states in his book *Road Traffic and its Control*, from which the subsequent quotations are taken, that, in principle, "no pedestrian should under any circumstances be allowed to set foot on the carriage way."

So long as pedestrians are allowed on motor roads, a solution of the traffic problem is impossible for two reasons:

1. Traffic must be brought to a complete standstill at frequent intervals, in order to allow for pedestrians crossing the road.
2. Any general increase in speed is not only difficult but positively undesirable, because of the increase in the number of accidents that inevitably results.

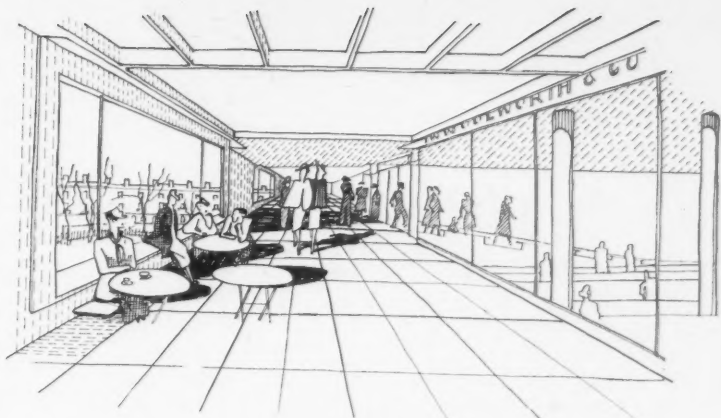
The tentative suggestion of men chiefly concerned with the regulation of traffic is a system of raised fenced pavements, connected at intervals by bridges. The effect of this would be to suppress completely the noble and ancient right to walk freely, and condemn us to an everlasting queue hemmed between high buildings above and roaring traffic below.

What is needed instead is the creation of a completely new ground level for pedestrians. In this era of flat roofs the question to be considered is whether it is possible to provide this by a systematic use of the upper surfaces of buildings which in modern towns are very nearly continuous. We already have control over the heights of buildings. We use it only to restrict development. The possibility of using it to create new space is worth considering.

Stationary Vehicles

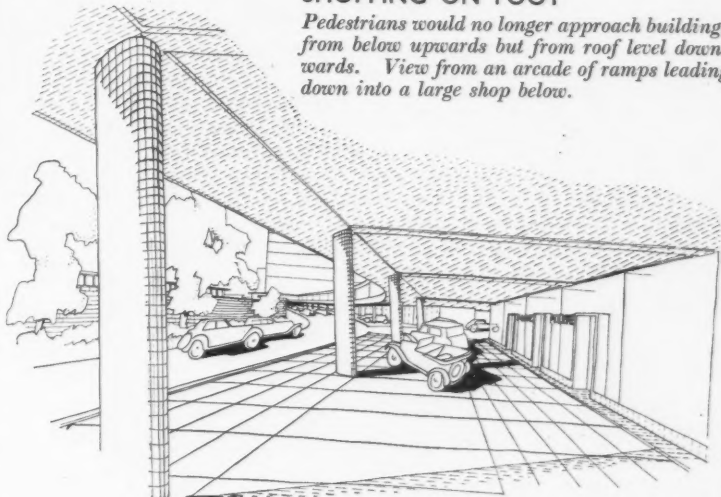
"Traffic cannot be poured in an orderly fashion through a jagged-edged conduit; a smooth bore is essential. Standing vehicles—if allowed—would destroy the smoothness just as badly as jutting curbs. . . . Standing space is in its way just as important as running space, but the two should be quite separate."

The first and most necessary step towards solving the problem of stationary vehicles is to define clearly the limit of responsibility of the highway authorities. At present they are empowered to provide space, but they are not compelled to do it. As the funds administered by the highway authorities are public money, it would seem reasonable to limit their responsibility to the provision of public services—i.e., to the upkeep of through traffic routes. The builder of a new house is obliged to provide his own hot and cold water system and to pay for the necessary connection between it and the main, which is made for him by the supply company. Motor sidings off the through traffic route are equally a matter for building owners. The real business of the highway authorities, like that of the public utility company, is not to provide such installations but to serve them, and to see that they are constructed in such a way that they do not interfere with the efficient working of the system as a whole.



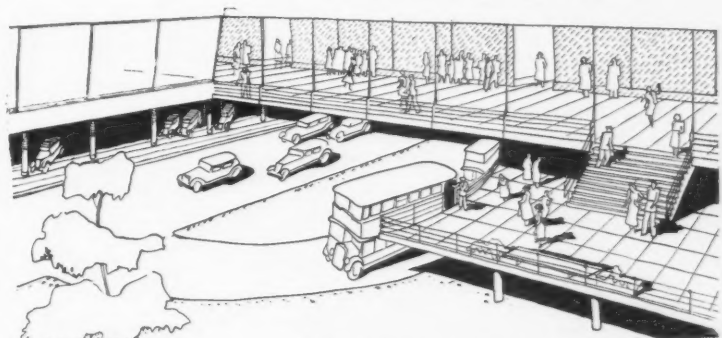
SHOPPING ON FOOT

Pedestrians would no longer approach buildings from below upwards but from roof level downwards. View from an arcade of ramps leading down into a large shop below.



SHOPPING BY CAR

Those wishing to leave their cars for long periods would park them in basement garages. Those making short calls only would leave them in parks recessed off the street.



SHOPPING BY BUS

Passengers would no longer be dumped on the edge of the roadway, but at bus stations placed well away from the fast traffic route and designed in connection with facilities for crossing the street.

A move in this direction was made when the Protection of Ribbon Development Act was framed. Its effect, however, has been small because

1. It only applies to new buildings.
2. Buildings are considered individually.

Stationary vehicles can be considered under three headings:

1. Vehicles making short calls outside particular premises, or loading and unloading goods.
2. Private cars parked for long periods, in relation as a rule to an area of the town.
3. Taxis.
4. Public vehicles (e.g., buses) stopping to set down and pick up passengers.

These are quite distinct problems: but it is possible to apply to all of them the principle that stopping places should be provided in accordance with the highway authorities' regulations, and that the cost

should be borne by those who make use of the space. It should be unlawful to stop in the public highway.

1. Provision for motor vehicles making short calls should be made by the owners of the buildings served on their own land at their own cost. Much the most economical way of doing this is to provide covered parking space along the edge of the highway recessed underneath the building served. The powers of the highway authority should be sufficient to secure that these parking spaces are planned as a whole, with exits and entrances at suitable points.

2. In the case of motor cars parked for long periods the present system is probably the best: individual motorists pay by the hour or the day, private enterprise being left to undertake the management. The highway authorities, however, should have power to see that accommodation is provided on a sufficient scale and at suitable points, and to require the town-planning authorities to reserve space for the purpose.

In central areas where the value of land is high, and large parking spaces at frequent intervals are necessary, open-air car parks are not a practical proposition. At present in central areas private firms find it worth while to construct six- to eight-storey buildings with double ramps connecting each floor, in order to let them off as parking space. It would be cheaper and more reasonable to provide parking space below ground level. If the basement space available were planned as a whole much larger areas could be provided and fewer ramps would be necessary. By having continuous car parks, stretching the entire length of the basement of each block of buildings, it would be possible to provide entrances and exits at suitable points planned in relation to the road system as a whole.

Taxis

The chief problem in connection with taxis is the problem of the "cruising" cabs proceeding slowly along the roadway in the hope of picking up passengers. If pedestrians were accommodated on a different level, entirely separated from motor traffic, the problem of the cruising cab would be automatically solved. Once this separation is made there seems no reason why taxis should not be treated like other parked vehicles. The fact that they cannot be sent to ordinary car parks at present is a reflection on the inconvenience, inaccessibility and rarity of car parks. If large and roomy car parks were provided, stretching continuously down both sides of every main street and directly connected by lift with all important buildings, then taxi ranks in these car parks would be very much more conveniently situated than they are at present.

Bus Stops

"The stopping of omnibuses and coaches prejudices the smoothness of the traffic flow, and when services are heavy it becomes a source of very serious obstruction to the general traffic. For this reason it is desirable that all stopping places should be embayed."—H. ALKER TRIPP.

Embayed bus stops are also necessary in order to make certain that pedestrians leave the bus only at properly designed stations, where there are facilities for crossing the road, etc. The present system of emptying passengers at random on the edge of busy traffic routes makes a proper segregation of motor traffic impossible.

As the largest volume of passengers proceed to and from large buildings (e.g. big offices and multiple stores), it would seem reasonable to design bus stations in connection with the entrances to these large buildings, thus reducing the number of turnings off the main road. Passengers would then only leave the bus in order to enter a building, or to proceed through it to a new system of pedestrian arcades and footways, which would be connected with the bus station by lifts.

Three-Dimensional Planning

The traffic problem in relation to town planning consists, then, in reconciling the following conflicting requirements:

(i) Motor traffic must be made less conspicuous; so long as it continues to occupy the foreground of every picture, the appreciation of good architecture is difficult—almost impossible. Busy streets are not a suitable setting for fine buildings.

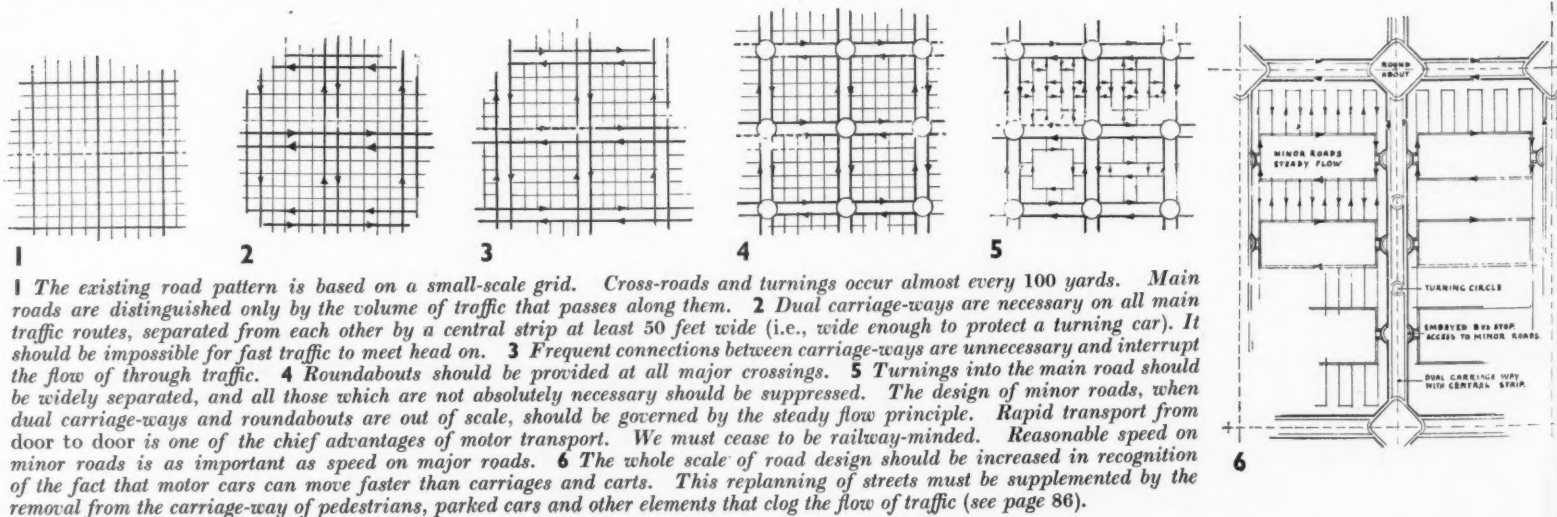
(ii) A great increase of space must be provided to meet the different requirements of through traffic, pedestrians, and stationary vehicles which are outlined above. There is no alternative to this except restrictions on the use of motor vehicles, which are the most popular and generally useful form of transport under present conditions. Good transport facilities are of great economic importance. Restrictions on the use of motor vehicles would be a national disaster.

(iii) It is uneconomical to provide the expensive public services necessary in urban areas under modern conditions relative to the type of low density development that was general in the nineteenth century. More buildings must be served by fewer roads in order to make the structure of a modern town an economic proposition. Services which are linked with roads include gas-light, electricity, sewage disposal, telephones (see also page 85, section 2).

(iv) More open space must be provided. This is necessary for two reasons. Open spaces provide the proper setting for monumental buildings; and they are necessary in order to provide reasonable recreational facilities for city workers.

It is quite clearly impossible to reconcile these conflicting requirements if we continue to plan towns on one level only. A town is a complicated structure consisting of many levels and must be planned as a whole.

At present we recognize that it is necessary to control the construction of buildings by building lines designed to secure sufficient space between them for public streets. But the traffic of a modern town cannot all be accommodated on the street. Sir Raymond Unwin has calculated that the day population of the Woolworth Building, New York, would occupy 1½ miles of footway 20 feet wide on both sides of the roadway outside the building, if they walked so that they had just sufficient space between them for slow movement. And that, assuming one person in ten travels to work by car, then parked cars would occupy the entire width of the 100 ft.-wide roadway for a distance of nearly one mile. The Woolworth Building is, of course, an extreme case. But the problem in London is similar. It is not enough to control the space between buildings. We must envisage the possibility of controlling the space above and below them in order to create new levels, on which traffic of different kinds can operate. Regulations enforcing a uniform roof height might be used to create a new ground level for pedestrians; in the same way regulations requiring the construction of basements of standard depth (if necessary sub-basements also) could be used to obtain large new parking places at a level when much space is wasted at present.



It has, however, certain disadvantages. The building must be four times as large in order to justify the fact that it is served by four times as many roads.

The area required for car park becomes enormous.

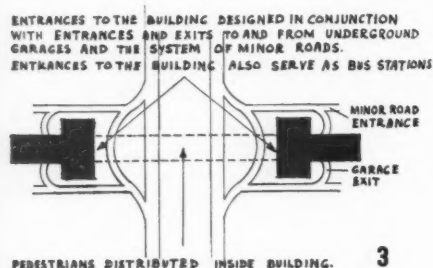
The open space created is a formless wilderness. Thomas Sharp gives a very good summary of the purpose of open spaces in towns: "They enhance or create amenity in a variety of ways. They afford relief against the artificial forms of streets and buildings, they provide dramatic two-dimensional contrast to the three-dimensional character of the town. They add dignity, scale and emphasis to its most important features. In fulfilling these functions they should act upon the civic attributes of the buildings and streets as civic attributes themselves not as non-civic alien intrusions. They should afford relief and contrast as one integral part of the civic organism acting upon another. They should be of the town, civic, sophisticated, formalised." Isolated towers, each standing on its own plot of land,

divided from the neighbouring plot by overhead road, are as suburban in their way as rows of little detached houses.

Road traffic is made unnecessarily conspicuous by the construction of overhead roads, at great expense.

Diagram 3 shows a third possibility. Frame construction is taken advantage of, and the building is placed across the road. The advantages gained are—

- (1) most of the shadow thrown by the building falls on the road and the building scarcely occupies any ground at all;
- (2) motor traffic can approach the building from either direction;
- (3) pedestrians can be distributed into their proper channels inside the building;
- (4) motor traffic can remain in its natural position on the ground. Any open space that is released by building high can be screened from the through traffic route by low buildings;
- (5) the basements of buildings lining the roadway can be used as garage space in connection with the large building, approached by ramps leading down from the back;
- (6) the low buildings mentioned above form an architectural link between the large buildings and the ground they stand on, and make it possible to formalize the open spaces created.



The conclusions we have now arrived at form the basis of the scheme which follows:

Planning with Modern Building Technique

The plan reproduced opposite shows diagrammatically a method of grouping high and low buildings, of distributing open spaces, and of classifying different types of traffic which reconciles the conflicting requirements that have been stated above by making use of modern building technique to plan in three dimensions.

The area of roadway is actually slightly less than it is usual to provide at present for all traffic purposes. But the roads are reserved for moving traffic only: pedestrians and stationary vehicles are provided for at other levels.

The area available for through traffic is therefore actually very much greater than at present, and its efficiency is enormously increased by removing all obstructions to a steady flow.

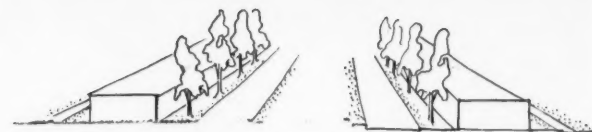
Car parks stretching the entire length of all main roads (and of minor roads also if necessary), equal in area to twice the total area of carriage-way, are provided at basement level. They could be provided at sub-basement level also. In addition to these long-term car parks there are pull-in car parks at ground level for motorists wishing to make short call only.

The area reserved for pedestrians is also enormously increased. This area, shown in the diagram as an unbroken stretch of flat roof, would of course be varied and made interesting by different types of penthouse construction, courtyards, arcades and colonnades containing display windows and entrances belonging to the buildings below. All buildings above terrace level would be designed to give protection from the weather, to provide a foreground in human scale full of interest and variety, allowing glimpses only of the higher buildings to be seen as features in proper perspective, and to permit free circulation, with ample space for loitering.

As far as building accommodation is concerned, assuming a terrace height of 20 feet and twenty-four storeys only in the high blocks, the total area of well-lit floor space provided in relation to the area as a whole would represent a possible increase of about 50 per cent. compared with present accommodation in a typical London district outside the City of London when the density is exceptional. This accommodation is very much more compactly arranged and the cost of services correspondingly reduced. The open space created is equal to about 40 per cent. of the total area developed.

The accompanying photographs are chosen to show that there are numerous precedents for successful architectural treatment of a layout of this kind. The liberal provision of open space and the striking contrasts of proportion that are created do, in fact, make architectural treatment particularly easy.

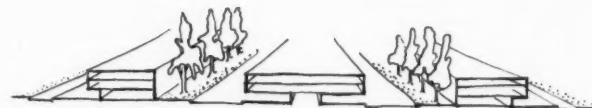
THE THREE-DI.



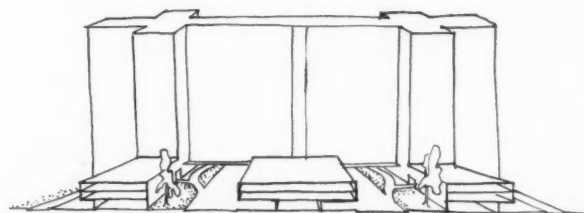
An arterial road with dual carriage-ways and a wide central strip. No pedestrians are allowed on the carriage-way, and buildings face on to service roads. This is the kind of road that is provided in country districts.



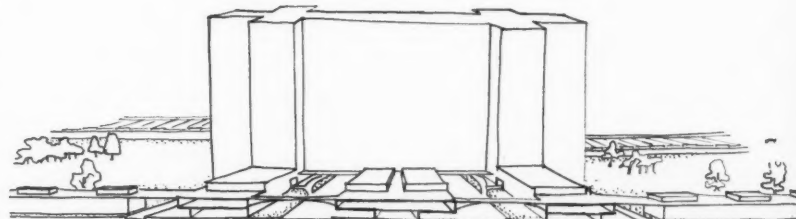
It is impossible to waste so much space in a town. It is difficult to bridge such a wide street. Therefore build on the central strip.



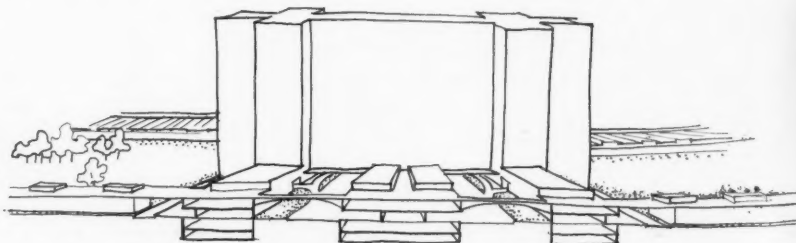
Stationary vehicles cannot be allowed on the highway. Therefore arcaded parking spaces must be provided off the highway to serve the buildings on the central strip. These would be continuous, and the entrances and exits from the main road would be spaced at infrequent intervals.



Subways are unpopular. So are footbridges. Therefore bridge the road with high buildings and people will cross the road without noticing that they are doing so. Provide bus stations in connection with these buildings.

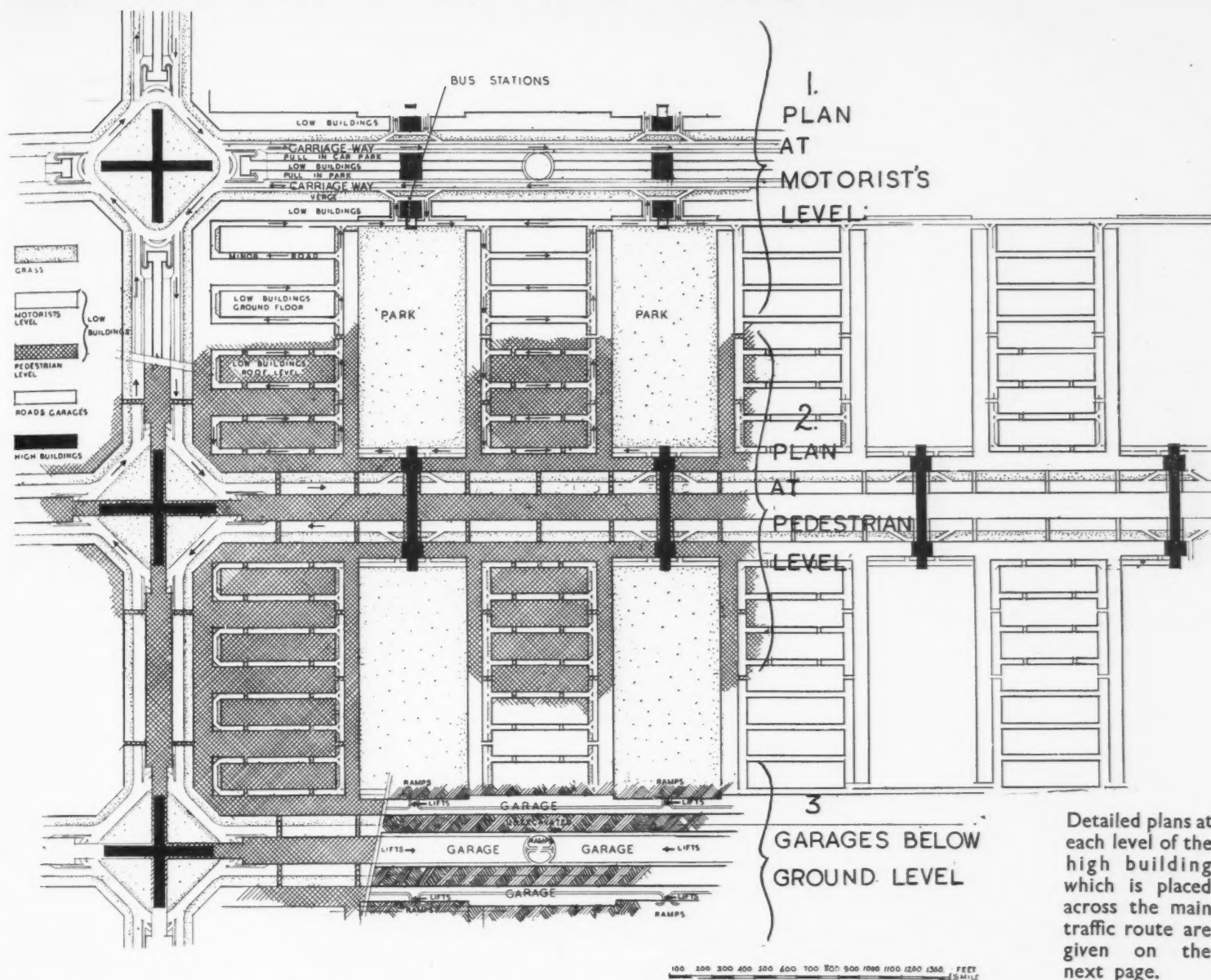


Pedestrians dislike frequent changes of level. Therefore create second ground level on the same plane as the ground floor of bridge buildings. This can be formed by linking together with bridges the flat roofs of low buildings. Create pedestrian arcades parallel with the roadway as a separate means of access for pedestrians to the buildings lining the streets. The frontage of these buildings is in the arcade, not on the street.



The area needed for car parks is many times greater than the area needed for through traffic. Provide underground car parks in basements stretching the whole length of the street, connected with large buildings by lifts.

I. MENSIONAL TOWN PLAN



Detailed plans at each level of the high building which is placed across the main traffic route are given on the next page.

Technical developments in the science of building make it possible to combine the elements of a town—land, roads and buildings—in new ways. They are: (1) Improvement in the art of waterproofing (producing dry basements and flat roofs). (2) Air conditioning (producing ventilated basements, making large and frequent spaces between buildings for purposes of natural ventilation unnecessary). (3) Steel and concrete frame construction (resulting in increase in height of buildings and the possibility of freeing the

ground at any level). (4) Lifts (allowing vertical communications). The above scheme is an attempt to show how they may be used to create a new and much more economical structure which makes it possible to reconcile the apparently conflicting requirements stated on page 84. If these inventions are to be used to full advantage they must all be systematically exploited by town planners. A town plan which ignores them is ignoring the most obvious means of solving present problems.



The old Adelphi building, showing segregation of goods traffic which arrived chiefly by river from other traffic which proceeded at a higher level. In the scheme illustrated above there would be a similar distinction between pedestrian traffic on the roof terrace and motor traffic which would enter buildings from below.



Arcading at Bath. This type of treatment provides a precedent for the recessed pull-in car parks which it is suggested should be provided along all through-traffic routes.



Approach to the Duke of York steps. A similar opportunity for monumental treatment is created by the need to design approaches from the open parks to the pedestrian level on the roofs of the surrounding terraces.

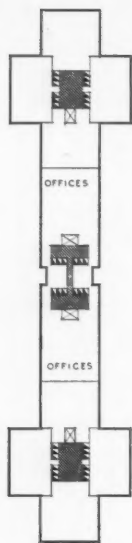


A road in the dock area of London. The appearance of minor distribution roads might in some cases be similar to this—pleasant, restful and efficient.

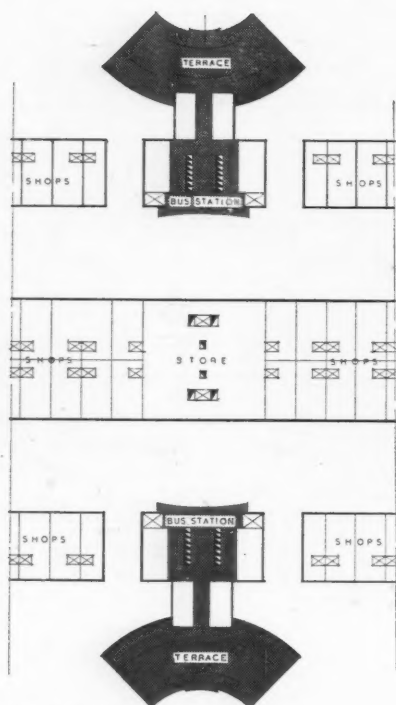
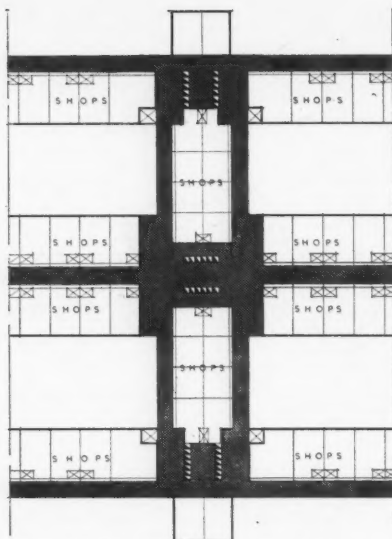


A Regency arcade. It should be possible to recapture this atmosphere of charm and exclusiveness when designing pedestrian courts and colonnades.

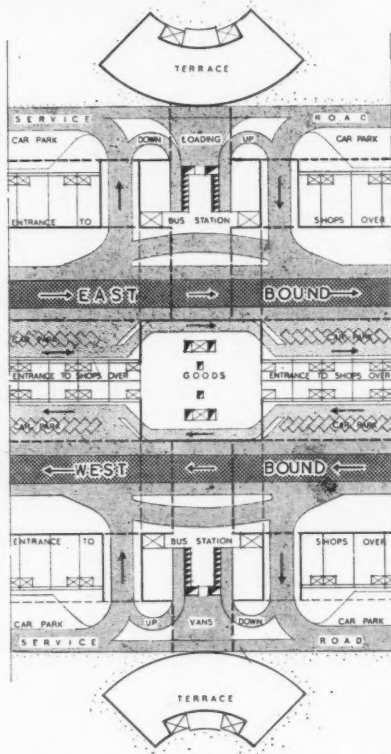
UPPER FLOOR PLAN



SECOND FLOOR PLAN



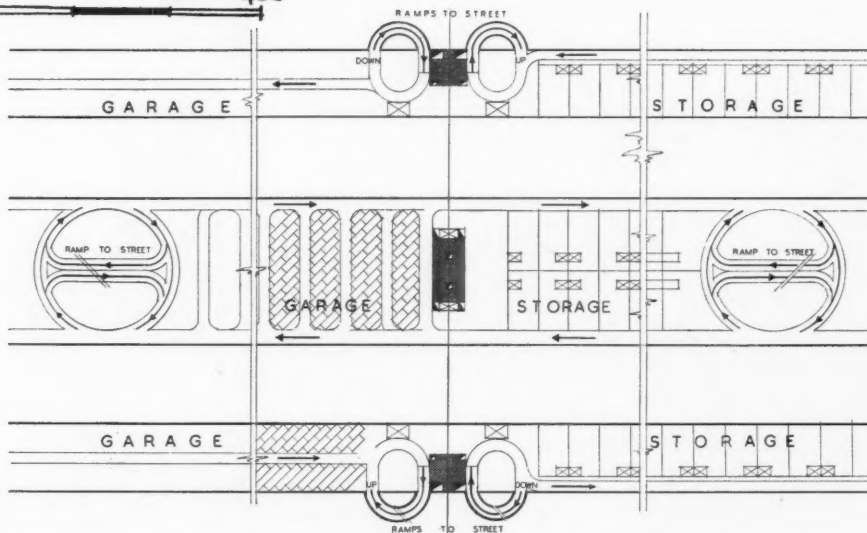
FIRST FLOOR PLAN



GROUND FLOOR PLAN

100 0 100 200 300 400
SCALE IN FEET.

BASEMENT AND SUB-BASEMENT FLANS



THE THREE-DIMENSIONAL TOWN PLAN

CLOSE-UP

Plans on this page show to a larger scale one of the high buildings straddling the roadway which form the key points of the district plan illustrated on page 87. These buildings are not merely buildings in the ordinary sense, but integral parts of a town plan. The lift batteries of these twenty-four-storey blocks not only serve the occupants of the building but also carry pedestrians from the shopping arcades down to the bus station, or yet further down to the garage below. The second floor of the building is not merely the main floor of a shop or office block. It is the centre of a network of arcades which distributes pedestrians in all directions throughout the area and a link between districts that would otherwise be cut off from each other by the main road. In addition to this the building is an integral part of the road traffic system. Ground and first floor are entirely devoted to a properly designed bus station. Entrances to public garages and to the system of minor roads are also designed at the same point in order to reduce the number of necessary turnings off the main traffic route.

Apart from entrances to the car park and turning circle there are no other turnings or frontages off the main road.

In districts where large quantities of goods are delivered it might be necessary to provide loading and unloading facilities in connection with storage in the basement. Normally pull-in car parks should provide sufficient space for the deliveries to small buildings. Large buildings would in all cases be provided with a separate loading dock in connection with each battery of lifts.

- Through traffic
- Access traffic
- Parking

HOUSE IN LINCOLN, MASS.



1, the house from the south-east. 2, from the north-east.

WALTER F. BOGNER, ARCHITECT



2

In designing this house for his personal use, Professor Bogner, of the Harvard School of Architecture, had two main considerations to bear in mind. Firstly, he was building with restricted funds and, secondly, he wanted to show the advantages of a house of modern design over an equally inexpensive one of traditional character.

Flexibility in the use of space was necessary for a family of three and for the occasional entertainment of a number of guests. The living-room was therefore planned so that it could be divided, as the occasion demanded, by a screen of wooden strips, the north-east bedroom was arranged to fulfil the dual purpose of a bedroom and of Mr. Bogner's dressing-room, and the scullery to serve also as the maid's bathroom.

Accommodation on the ground floor consists of a combined living- and dining-room, kitchen, scullery and garage, and on the first floor there are three bedrooms, a study and a darkroom. There is a porch adjoining the guests' bedroom from which excellent views of the surrounding country can be enjoyed.



3



4

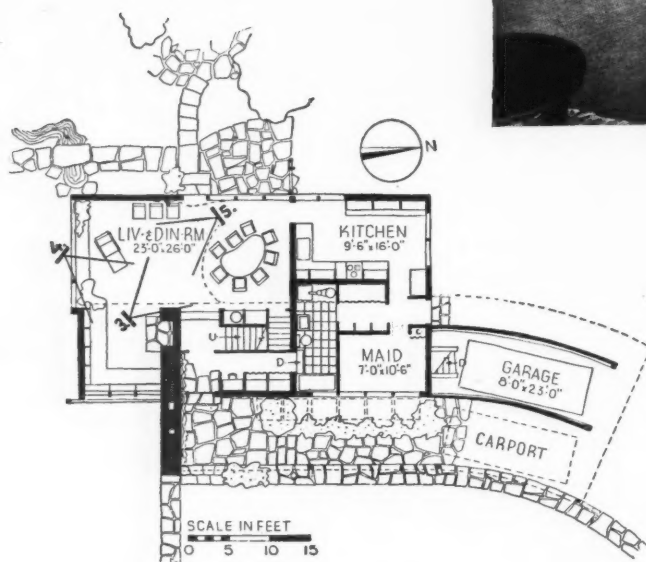


5

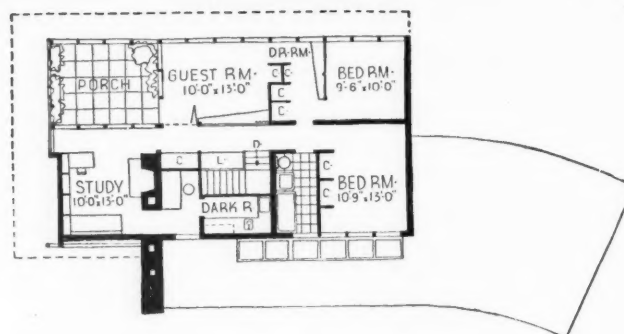
In designing the interior of the house the architect has sought to convey an atmosphere of openness to out-of-doors, whilst at the same time preserving facilities for privacy and concentration, as can be seen in the illustration of the living-room with its library alcove, 5.

Walls are built of concrete blocks, waterproofed, and surfaced externally with redwood. Internally they are lined with wallboard or plywood, and the floors also are of plywood covered with felt, carpet or linoleum. The roof joists and boarding are surfaced with tar and gravel.

3, 4 and 5, the living-dining-room. The points of view from which the photographs were taken are shown on the ground floor plan.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

These monthly articles are frankly about æsthetic aspects of architectural design. They are written in the belief that we can now take the practical basis of modern architecture for granted. They claim, that is to say, that we have got beyond the stage when we were so thankful for the sheer reasonableness and efficiency that these were sufficient recommendation in themselves, and that there is room now, in criticism as in actual design, for study of the graces that all good architecture displays, whether in the precedents set by the past or the growing maturity of the present.



CRITICISM

By Peter F. R. Donner

*Houses rise and fall, crumble, are extended,
Are removed, destroyed, restored. . .*

T. S. ELIOT, *East Coker*.

WHAT quality is it in Sir Herbert Baker's extension of the Bank of England that makes it seem to so many people—myself included—so æsthetically unsatisfactory an example of the art of adding to an existing building? Let it be said right at the start that an æsthetically satisfactory solution of the task set by the Governors and Directors of the Bank was impossible. For this was the task: The whole of Sir John Soane's building was to be levelled to the ground save for the surrounding screen wall and certain individual rooms which were—with characteristic alterations—re-erected in a zone just behind and along the screen wall. With the exception of this outer ring, Sir Herbert Baker's building is essentially independent of Soane's, although it appears most unfortunately as a superstructure piled on top of Soane's one-storey building. In accepting the job Sir Herbert accepted these terms. He could have argued that he was not going to treat a great fellow-architect's *chef d'œuvre* in a way in which he would not like to have his works treated a hundred years hence, but that no doubt would not have stopped the work going on under another architect.

However, just because I am convinced that the Bank as it now stands is an artistic tragedy, I want to state the case for the Governors as fairly as I can. They could have decided to do one of three things. Knock down Taylor's and Soane's work entirely and rebuild on the site. (That would have been the cheapest and

from a practical point of view the most convincing solution.) Or leave Taylor's and Soane's work as far as possible untouched, using it chiefly for representational purposes and build on some adjacent site to be acquired for the purpose. (That would have been dearer and seemingly wasteful.) Or do what they did—that is, keep some features of the old building, adapt a few others, and destroy most. That is probably not less expensive a method than starting afresh somewhere near by, because re-erecting existing buildings or rooms is always a disproportionately costly affair. Had the Governors chosen the first, most destructive, method, there would no doubt have been an outcry even among the hardened Londoners. Had they chosen the second, the outcry would have come from their own ranks. Think of buying a new site, when a most favourably situated site is available obstructed only by a superannuated agglomeration of rooms and yards placed at odd angles? So they chose the third, which, being a compromise, recommended itself naturally to a committee of British business men.

Of the categories enumerated by Mr. Eliot in the lines at the head of this article, four apply to Sir Herbert's treatment of the Bank. He extended, removed, destroyed



Soane's Bank was conceived as a one-storey building and was one of London's masterpieces. Was it wise to debase it to serve as the footstool of a vast new building?

and restored. It is only with the extending aspect that I can deal here. This appears modified in a twofold way by the special conditions of the case. The existing building happened to be one of the five or six most outstanding examples of the style of an epoch in English history. Adding was therefore everywhere bound up with preserving. And since, moreover, the new parts which Sir Herbert had to erect amount to five times the height and well over five times the volume of the existing building, the right relation of old and new was exceptionally hard to achieve.

Now it can be stated as a general maxim of extending that two qualities are needed in an architect to make him successful at such a job: tact and courage. A perfect balance of the two is rare nowadays, because as a legacy from the nineteenth century architects still suffer from an inferiority complex as to their ability to compete on equal terms with good work of the past. Thus the most convincing solutions of the extending problem known to me have been found where the old building to be added to was in itself of little æsthetic significance, or at least not of a self-assertive character. I illustrate overleaf a courageous addition of a wing to an eighteenth-century cottage near Ascot, by the bold placing of modern proportions, modern mouldings, modern window shapes and a flat roof cheek by jowl with the unassimilated forms of the past. Yet thanks to the architects' sympathy with the old house, their susceptibility, their tact, there is no clash between past and present. For one thing, they avoided a change of material. The new wing is brick, as is the old house. Moreover, the rhythm of the eighteenth-century

sash windows is taken up by the trellis on the piers between the French windows. And, above all, the junction between the two parts is smoothed over by the ingenious fenestration of the furthest bay to the right. There, on the ground floor, the scheme of the twentieth century is carried on; on the first floor that of the eighteenth. This sounds crude and elementary. In its actual appearance it is surprisingly successful. The traditional shape of the first-floor window blends perfectly with the horizontal window band immediately on its left.

However, a Queen Anne house is almost an ideal proposition for the modern extender. Its style and also—which is just as important—its attitude towards domestic comfort marry more happily than any with those of today. But what would happen if an architect were asked to add in strictly contemporary forms a chapel to a mediæval cathedral? Could æsthetic unity be achieved? One should be careful not to exaggerate the unity between a Perpendicular chapel and a Norman choir. When the chapel had just been completed, it certainly did not look as much of a piece with the choir of two hundred years' standing as the passing of five centuries has made it appear to us. Yet I cannot imagine time to mellow into harmony what would result from the combination of, say, the Cathedral of Chartres with a chapel in the style of Perret's Notre Dame du Raincy or that church at Bale which the sensible, dry and somewhat malicious Basileans have christened the Soul Elevator. For as a matter of principle the contrast here is different from that between Norman and Perpendicular, Queen Anne and the twentieth century, or even Norman and Baroque. The point is



Courage and tact are the two qualities needed in the architect who has had to add to an existing building. Courage to hold up the ideals of his own age, tact to blend it with the past. In Messrs. Tatton Brown and Lionel Brett's cottage near Ascot a rare balance of old and new is achieved. As a rule architect-extenders possess either too much tact and too little courage—this applies to Mr. Morley Horder's Tudor cottage in Kent of which the left wing is new, the rest old though re-conditioned—or too much courage and too little tact. Of this Sir Herbert Baker's Bank is perhaps an example—for the reasons given in the text of this article.



that when Maximilian von Welsch and Balthasar Neumann added the Schönborn Chapel to the transept of Romanesque Würzburg Cathedral, theirs was still the same faith as that of the mediæval builders. Only after their time was the attitude of Western man to Christianity subverted.

Still, this would apply only to church building. In secular architecture there appears no reason why in spite of contrasts between past and present, and in fact by means of these, a new harmony might not be conceived as happy as that of the Schönborn Chapel. von Welsch and Neumann obviously were not lacking in courage. But the tact with which they kept the lively rise of their dome under the protecting triangle of the twelfth-century roof, and the sprightliness of their decoration under the calm and powerful uniformity of the Romanesque niches and arched corbel-table, is of the rarest indeed.

For what actually happens almost universally when a building of character has to be extended is that the architect shows himself possessed either by too much tact and too little courage, or by too much courage and too little tact. The first appears, for instance, in good

revivalism of the Guy Dawber kind; of the second Sir Herbert Baker's Bank of England is a particularly unfortunate example, because the courage is not that of a new age asserting itself against an old. A surrealist might place two contrasting statements side by side, enjoying the shock of the contrast: arrange a branch of ivy round a motor-car steering wheel all chromium and rubber, or, like Mr. Lubetkin, harness the caryatids of ancient Greece into his entrance front of Highpoint II. No such *épater le bourgeois* was intended by Sir Herbert. His style is just too near Soane's—Classic Re-Revival as against Classic Revival—for the man in the street to recognize the handwriting of two distinct personalities. He takes it all as one as he rightly takes the Tudor-Guy Dawber partnership. That is why in Sir Herbert's case tact would have been so essential, tact and even some humility.

It is painful to see Soane's one-storey composition debased to be what Nash's Doric basement rightly is to the whole of his Carlton House Terraces. It is more painful to see the new building by sheer weight of mass hold down Soane, as the hoof of the prancing horse on a Baroque equestrian monument seems to

trample down the allegorical figure of some vice or villainy. And the operation is more painful still, because the new Bank in spite of its masses can in no respect compete with Soane's austere grandeur. One need only compare Soane's

corner columns and the powerful entablature above with Sir Herbert's pretty arrangement of columns and curved pediments around his centre windows, his quoins and dainty festoons, or Soane's relation of blank wall to raised or recessed features with Sir Herbert's, or Soane's original top balustrade, a weighty horizontal of unmitigated and irresistible monumentality with Sir Herbert's domesticated hipped pantile roof. The new addition, though many times the volume of Soane's, looks small, Soane's work mightier than ever. Soane is taciturn (he frowns; and rightly so), Sir Herbert is polite and affable. Soane is certain of his ground; is his successor?

Of the remodelling of the interior I cannot say much, though in it the same lack of respect seems to be rampant. The Rotunda is destroyed, the Lothbury Court is destroyed, the Governors' Court is destroyed. Of the re-erection of rooms preserved I only mention the fact that in one case three of Soane's maturely thought-out spatial units were knocked into one, keeping their individual domes and such motifs as the decoration of the spandrels beneath but eliminating the original separating walls on whose proportions and integrity, of course, the conception of each room—dome and all—was based. But that is part of the preserving catastrophe that is the new Bank of England, not of the adding catastrophe. As for this, once again, how could it have been prevented? There seems only one answer. The course the Governors should have taken is the second of the three possible ones. In my view, Soane's building should have been preserved in its entirety and used as best it could. A new office block should have been erected on the nearest site which the Bank could have secured. On this site the architect would have been free to develop his own style without regard to Soane's. If this procedure had turned out to cost more than the one chosen, could not the authorities of the Bank who are known to be generous in their arrangements for their staff for once have spent a large sum on preserving a national monument of the first order?

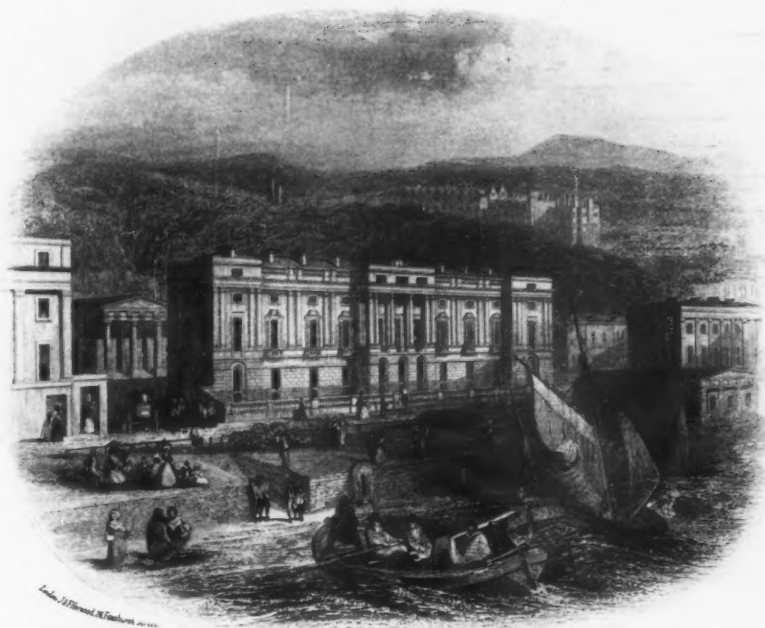
The architectural idioms of different ages and opposed character can be blended together to perfection if the architect who adds believes in his own style and appreciates that of the past. The way in which the Baroque dome of the Schönborn Chapel is kept within the triangle of the Romanesque gable of Würzburg Cathedral is most instructive and satisfactory.



The contemporary speculative builder is apt to be regarded as a purely destructive agent, or at best as an individual to whom social responsibility is quite foreign. And it is forgotten that we owe some of our finest pieces of town-planning—such as the Bloomsbury squares—to speculative builders of an earlier period. For in the past they were men of vision, who were responsible for much of the unity and orderliness that we envy in eighteenth- and early nineteenth-century development. Typical of these was **JAMES BURTON**, founder and builder of St. Leonards-on-Sea, whose career is outlined below. He is also of significance as the father of Decimus Burton, the architect of the Hyde Park Screen, the Athenæum Club, and much of Tunbridge Wells: but it is his enterprise in laying out the new resort of St. Leonards, from 1828 onwards, that the following article records.



1, Reproduced from a relief on a memorial fountain recently rediscovered in the St. Leonards Gardens (formerly Subscription Gardens.)



Chamberlain's Royal Victoria Hotel, St. Leonards, Hastings. March 22 1841.

2, The Royal Victoria Hotel, St. Leonards, Hastings, dated 1841. The Assembly Rooms can be seen between the Hotel and the Marina houses, also the Royal Baths at the right of the picture.

James Burton, who was born on July 29, 1761, and who later lived at "The Holm," Regent's Park, London, where he worked as a builder, always had one ambition: to design and build a town. His real name was Haliburton, and he was a descendant of the Roxburghshire family of that name, which he had abbreviated in early life.

Burton's building work was prolific. One of his papers suggests as many as 2,366 houses at an estimated value of £1,848,900. Many of these houses were in the Bloomsbury district of London, and "a plan of intended improvements on the estate of His Grace the Duke of Bedford," dated 1800, gives his address as being in Bloomsbury.

In or about the year 1827 Burton was ready to realize his ambition, and naturally his first problem was to find a site. He evidently recalled a visit to Hastings in 1815, with his son Decimus (who was later to become celebrated as an architect), when the former was said to have remarked upon "the beauty of the valley to the west of the town, with its wooded glens and cliffs, shaded from the north winds," for he purchased the estate which contained this valley from the trustees of the late Charles Eversfield.

The vale lay between two hills and was densely wooded. Nearer the sea there was a pond known locally as "The Old Woman's Tap." This was fed by a spring higher up the valley. Near by was the Conqueror's stone, upon which tradition has it that William feasted on his way to the Battle of Hastings.

The years 1828 to 1830 must have been very busy ones, for during this time the town was designed and building commenced. Burton evolved several designs for his town, all symmetrically arranged about the valley which was to be the central axis, and all embodying an hotel as the principal building. (The drawings of these designs are still in existence.)

Decimus Burton was never in favour of his father's embarking on the St. Leonards scheme, and it seems that he had very little to do with the planning of it, although he may have helped his father on some small matters connected with it. The entrance to the Subscription Gardens (11) does show the influence of Decimus Burton, however, and after his father's death he did undertake some building work in the more outlying parts of the town.

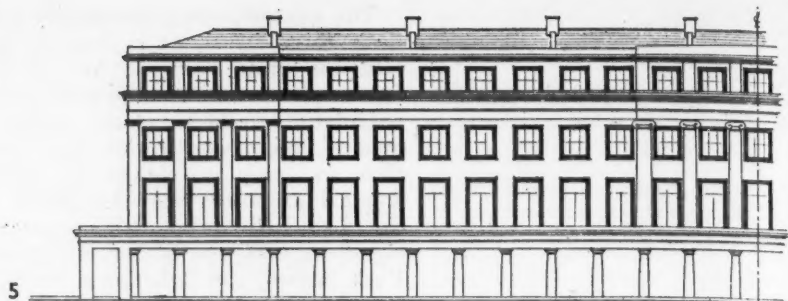
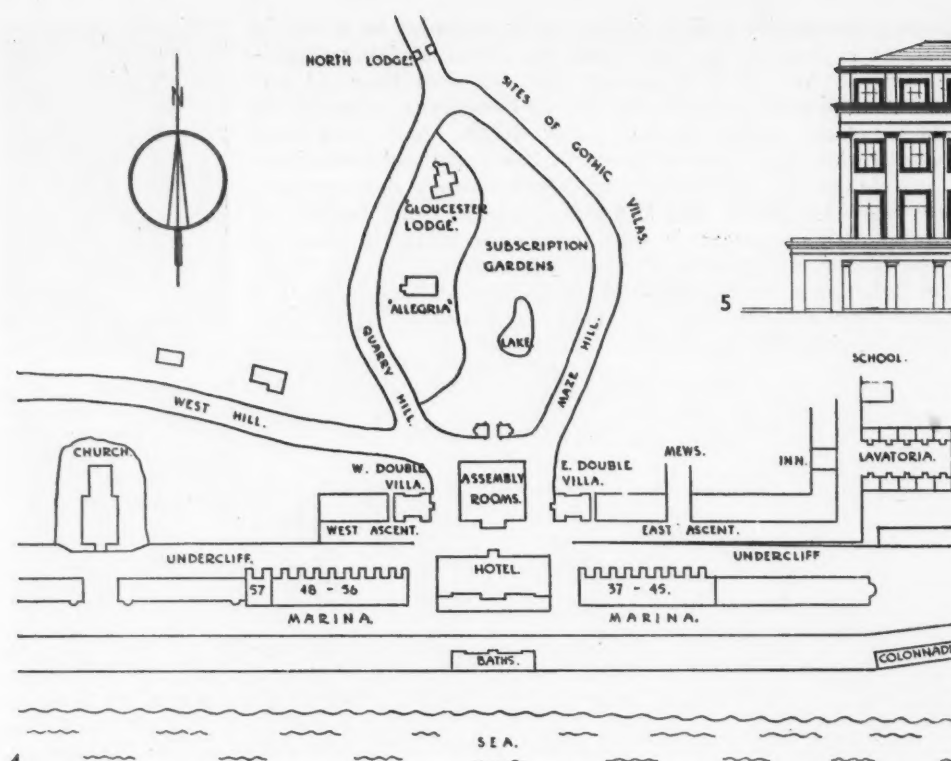
The St. Leonards Hotel—later to be called the Royal Victoria Hotel (2)—was the first building commenced, the foundation stone being laid on March 1, 1828. William Golden, a labourer on the work, is said, in Brett's *Manuscript History of Hastings and St. Leonards*, to have stated that it was James Burton himself who laid it. The hotel was built on the site of "The Old Woman's Tap," which had previously been drained. The east and west ends of this building were designed as private houses which could be incorporated with the hotel when the demand for accommodation increased.

The first building to be completed, however, was the Burton family's own home—namely, No. 57, Marina (7). Burton evidently considered that as designer and proprietor of the town he was entitled to a residence distinctive from the rest, for No. 57 has no counterpart on the eastern side of the central axis. Queen Victoria stayed at this house when, as Princess, she visited St. Leonards with her mother, the Duchess of Kent, in 1834. Two blocks of residences were then built, one to the east and one to the west of the hotel (5, 6), with a colonnade of Doric columns on the seaward side. These houses are numbered 37-45 and 48-56 on the plan (4). The Assembly Rooms (3) were constructed behind the hotel on its axial line. They were used for balls and other social functions, and until 1832 as a place of worship.

Behind the Assembly Rooms, again, were the Subscription Gardens, which had been laid out



3, The Assembly Rooms. The buildings on the left and right were built at a later date.



with ornamental water and other features, developed from the natural landscape. The gardens were entered through the South Lodge (11), which consists of a central opening with rooms for gardeners on each side.

On the Parade opposite the hotel Burton built a long low building (8) so as not to obstruct the view of the sea from the hotel—which contained the library, bank, and post office at one end, and a refreshment-room at the other, with baths in between. Osborne's *Strangers' Guide to Hastings and St. Leonards*, 1858, states, "There are the Royal Baths on the Parade at St. Leonards. They contain eleven baths, shower baths, and a plunging bath, portable baths may be obtained, a sedan chair is kept."

The people of Hastings were not very pleased at the building of a rival resort so close to them, and the Hastings shopkeepers would not serve residents in the new town, and for this reason a range of shops known as the Colonnade was built at the eastern end of the Parade. They were destroyed about 1927.

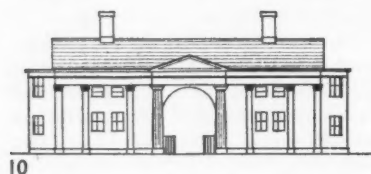
The hotel and Marina houses were entered from the road at the rear, not from the Parade, which was thus left clear for visitors and residents as a promenade. Several modern Belgian seaside resorts have been laid out on this principle.

Mr. Burton constructed a road northwards to connect with the main Hastings-to-London road. Where this road left his estate on the north he erected the North Lodge over the road (9). Sir Rider Haggard, the novelist, lived there later in the century. The boundary with Hastings on the east was marked by a similar archway—destroyed in 1895—only this was Classic, whereas the North Lodge is "Gothic." In 1831 the *Despatch* coach, from the Royal Victoria Hotel to London, using the new road, took only 7½ hours.

Behind the Marina houses on the east was an incline called East Ascent, leading up from the Assembly Rooms to the school and the houses of the poorer classes. These latter were in Lavatoria Square—a classical term meaning Laundry. This Square, built 1829-30, consisted of two rows of houses of the type shown in the drawing (12), one on the north and one on the south side. On the centre line of the Square, and on the west of Mercatoria, was built the Horse and Groom Inn by a Mr. Milstead.

Not content with building houses, James Burton took an interest in the well-being of those who were to live in them, for on December 1, 1831, he issued printed "Cottage Regulations, recommended for the Preservation of Health," including such suggestions as the regular washing of floors, opening of windows, removal of refuse, and even personal items of clothing and diet, including abstinence from "indulgence in spirituous liquors."

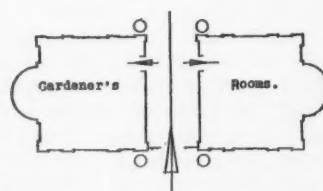
4, lay-out plan of St. Leonards-on-Sea. 5 and 6, elevation to the sea and corner view of Nos. 37-45 and 48-56, Marina. 7, No. 57, Marina. 8, the refreshment room end of the Royal Baths, which is still used for its original purpose. 9, North Lodge, entering St. Leonards. 10 and 11, elevations, plan, and view of South Lodge, the entrance to the Subscription Gardens.



FRONT ELEVATION



SIDE ELEVATION



PLAN



To the west of the Assembly Rooms another incline was commenced to balance that on the east, it being called West Ascent. At the commencements of the two Ascents were built the East and West Double Villas respectively (13, 14). The West Ascent was not completed owing possibly to a landslide on the edge of the cliff. Burton changed his scheme, and the summit of the west hill was attained by another road further back on the cliff.

James Burton had intended to build a church on the top of the west hill, but either owing to the instability of the ground or the exposed nature of the position he built it at the bottom of the cliff instead. The foundation stone was laid by Princess Sophia of Gloucester—a resident of St. Leonards—on September 8, 1831. Among Burton's drawings there is one of a church in the Classic style, with an Ionic portico, and a small dome over the dwarf tower at the opposite end to the sanctuary. The actual church erected, however, is a Gothic revival.

It is noticeable that after 1832 the character of Burton's buildings changed from a severe classicism to Gothic Revival, and, in fact, about this time Mr. Burton and his family moved from No. 57, Marina, to "Allegria," Quarry Hill, one of the Gothic villas that were being erected around the Subscription Gardens. In the "Gloucester Lodge," next to the Burtons' new home, resided the Princess Sophia of Gloucester.

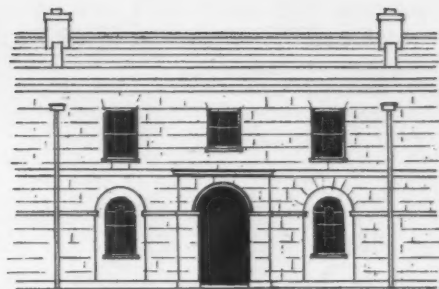
By 1831 the town had spread to the east and west along the sea front (15), and villas and houses were built in the back parts of the town; thus individuality began to triumph over the ordered planning of 1828.

Very few men can have had the privilege of founding a town in the same way that Burton did, and when the vastness of the undertaking is considered it is surprising that so few faults have manifested themselves in the course of time. It might be mentioned, however, that the East Ascent is rather narrow, and in the early days a coach and horses plunged over the top into the undercliff below. Also the town was built too literally "on-the-sea" and not sufficiently "by-the-sea"; as a result the maintenance of the sea wall is a constant cause of expenditure.

James Burton's will, dated March 17, 1837, gives us the names of his surviving children—Eliza, Jane, Octavia, Jessie, William, James, Septimus, Henry, Decimus and Alfred. He wished them all to administer his estate, but as that would have been very difficult, Alfred was appointed Administrator. Alfred was also the first St. Leonards man to become mayor of Hastings.

The founder of St. Leonards died on March 31, 1837, and was buried in a miniature pyramid on the west hill overlooking the town that he had built, and which was unlike most towns in the kingdom in that it was not the work of succeeding generations, but was the result of one man's inspiration and energy. 15

PETER CLARKE



12



13

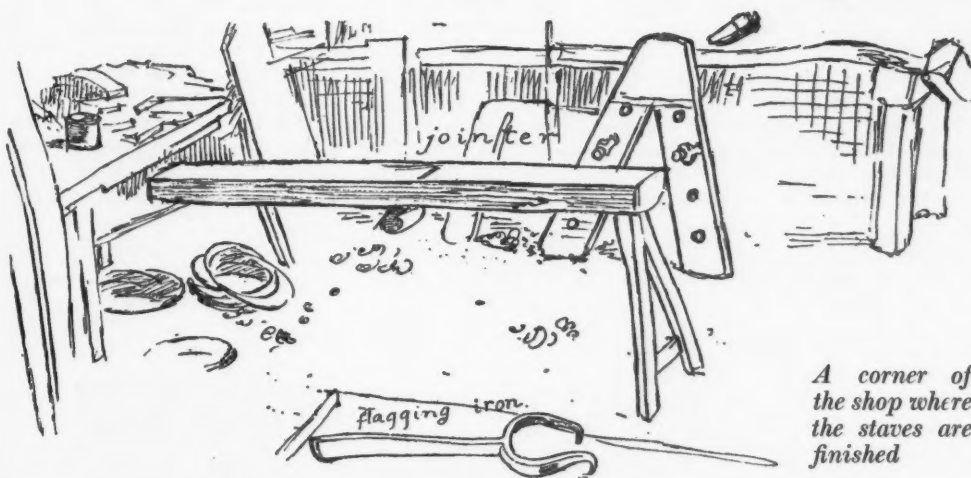


14

12, elevation of a house in Lavatoria Square. "Lavatoria" is a classical term meaning Laundry. 13 and 14, the east and west double villas. 15, an old print of Brunswick House and Undercliff, dated 1849. A block of flats was recently built on the site of Brunswick House.

COUNTRY CRAFTSMEN

The Cooper



A corner of the shop where the staves are finished

By Thomas Hennell

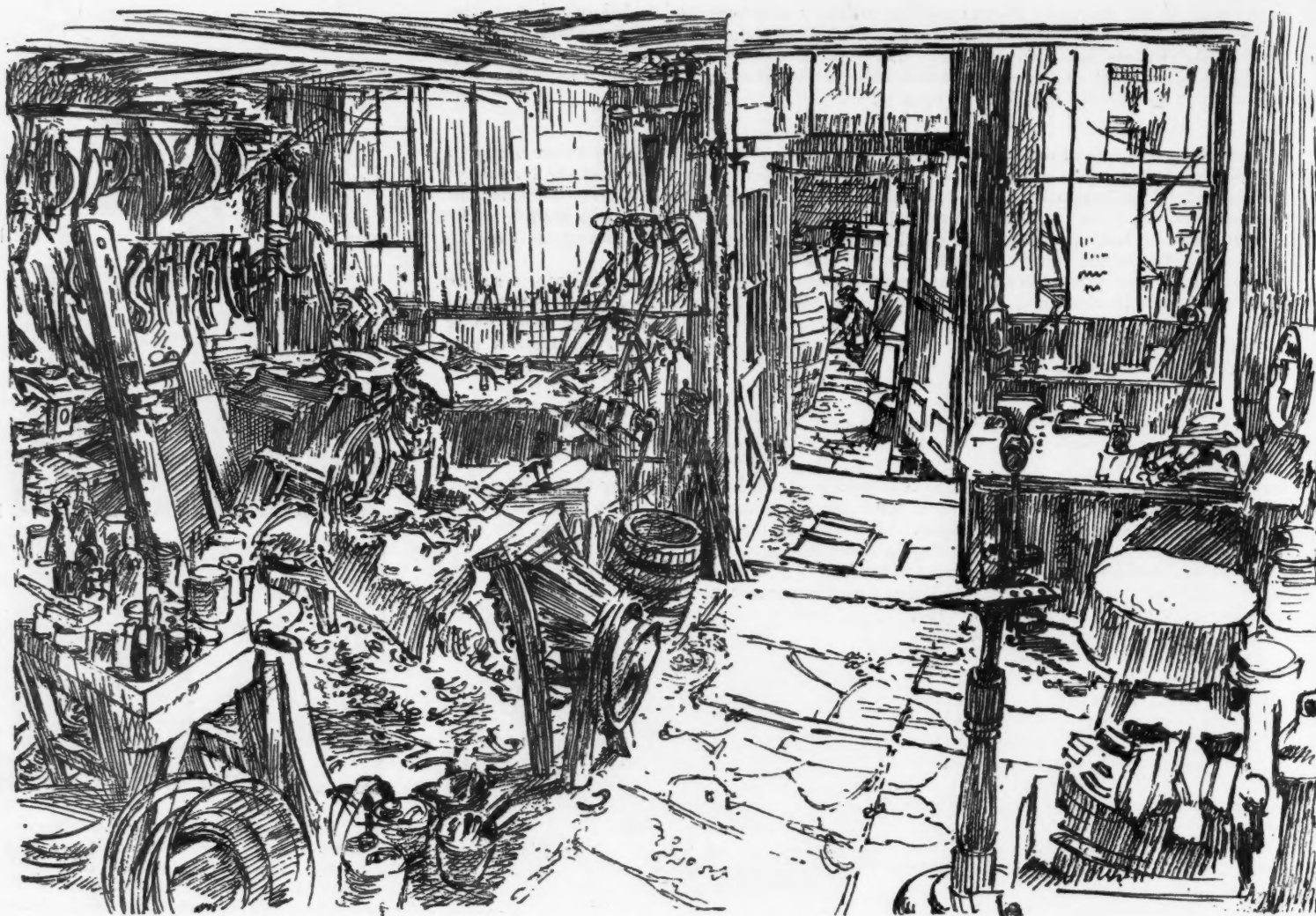
THE cooper makes casks and barrels for wine and beer, and tubs for washing, or for holding ornamental plants. A great part of the mystery in his craft consists in the shaping, fitting and binding of the barrel-

staves so as to form durable vessels which will never leak, and of sizes and shapes which are right for several purposes. In former years there were more small breweries than at present, and they kept the shop full of work; but now that very large combines have almost a monopoly in the malt liquor trade, these have their own cooperages, and little is left for independent firms to do.

And then the place of barrels has been taken by metal containers, oiled cartons and such-like non-returnables. A few years ago one used to see wooden tar-barrels lying alongside the highways wherever the road had been re-metalled, and most of these were superannuated beer-barrels. But they made such capital water-butts, and such ready and powerful fuel, that there was a high percentage of annual losses. So now iron drums are seen in their place, and the breweries have taken to carrying their wares in motor-driven steel tankers.

The cooper, who is the subject of this article,* however, is still asked to do very miscellaneous and occasional jobs, and as his trade is a specialized one, his workshop is hung round with a great variety of strangely formed tools. These tools are, in fact, the relics of half a dozen coopers' businesses which formerly thrived in the same city, and many of them are more nearly two than one hundred years

* Clapp Brothers, Walcot, Bath.



The cooper's workshop

old. No ordinary carpenter, or wheelwright even, would know how to make even one stave of a barrel quite accurately; the staves must be all alike, fitted edge to edge, so that the joints are radial to the centre (or axis of the barrel), and tapered equally above and below to the ends from the widest girth. Also the barrel must be made to contain an exact measure. I shall try presently to show how this work is done.

But in this workshop an allied trade is also carried on; that is, the making of sieves and measures. The sides of these are formed of thin oak planks steamed and bent cylindrically, the round bottom exactly fitted within a groove, the ends of the bent plank tapered, lapped and riveted. The small measures are quite plain with the mark of their capacity branded on the outside, but the larger ones have iron handles. These handles, together with the barrel-hoops, are made by the cooper himself at a small forge. One sometimes sees beautifully polished wooden measures at mills or corn-chandlers' shops; but this "finish" is put on by the user and not by the maker, for it is simply caused by the friction of innumerable grains. When several of these measures are to be made together, a standard measure is kept filled with mixed seeds which have been very accurately measured out and checked; and these seeds are poured into each new vessel, so that it shall contain exactly the due amount.

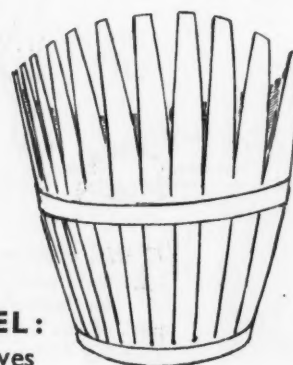
There is probably today a legal formula of height and girth for the standard measure, but this has been liable to change by city

corporations within the past thirty years, and in past times it varied much. I have an old table showing the exact capacity in dry measure of cylinders of varying breadth and height.

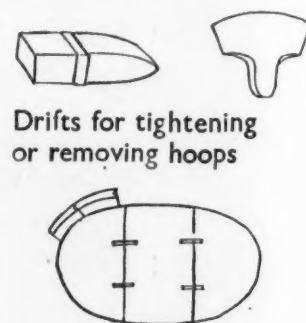
A third branch of the business must be mentioned, and this is wood-turning. Mr. Clapp is able to make wooden screws for linen-presses or cheesewrings, rollers for mangles, balusters and table-legs, bowls, skittles and wooden balls.

His premises are very much more extensive than they appear from the street. They are, in fact, built on terraces of an almost precipitous hillside, so that one climbs steps and ladders from stone floor to stone floor; and the upper workshops extend above and behind

the adjacent buildings, far beyond the modest limits of the shop-front in the lower road. The heaviest timber is kept on this bottom level; the large butts are made upon the stone floor next above; the office is on a wooden floor built out over the street front. Then another terrace and steps, and a long workroom with plenty of room for tools and all the easily handled jobs. Towards the further end of this is a lathe used for turning stone balusters. The little forge fills a final corner, and nearer to the middle of the workroom is a large slow-combustion stove. This stove is usually alight, for it can be made to heat a boiler from which steam is supplied for use in the "steam-trunk," and at sufficient pressure to drive the lathes also, though a small



BEGINNING A BARREL:
hoops filled up with staves



Drifts for tightening
or removing hoops

Tub bottom

dynamo has lately been substituted for that purpose.

The loft above contains the lighter lathes and the steam-trunk, and is used for bent woodwork and for light wood-turning. This steam-trunk is a ponderous box of very heavy and well-seasoned wooden baulks, fastened so that heat and moisture can hardly warp them, and into this box thin elm-boards are introduced. Being thus steamed and softened, they are rolled with a press between flexible sheets of zinc, which presses and leaves them clean, removing surface irregularities.

Such light work calls for accuracy of measurement and judgement, but in making a barrel the physical difficulties are greater. The cooper has his rule for each size and type of barrel, and knows how many staves of a given length, and of uniform end and middle measurements, will be required to fill up the hoop.

Here are the names and uses of a few of the cooper's tools. *Shaving-horse*: to sit on and to hold the stave, which one shapes first at one end, then at the other with the *draw-knife*, a blade with a handle at each end, with which the wood is pared down; the *curled or hollow*

knife is similar, but shaped for the hollow inner surface of the staves, as the *bucket shave* is for wooden buckets.

The *jointer* is a very long plane securely mounted on a stand with the edge of the plane-iron upwards, so that the edges of each stave can be shaped to fit at exactly the true angle, by pushing the stave firmly and evenly against it. The *croze* is for cutting the grooves inside each end of the barrel, to hold the top and the bottom. The *bick iron*, a narrow anvil, mounted about 3 feet 6 inches high, is for rounding, boring and cutting the iron hoops: the truss hoop for fitting staves (this does not remain as a fixture on the barrel). Other tools are the *gauging rod*, a rule, pointed with brass; *bottom saw*, *pad saw* and *keyhole saw*; *topping plane*, for making the top of the barrel staves quite level, *round shave* for drawing down the joints, *broad axe* for splitting down staves, and another tool for splitting (which has lost its name, but which is known elsewhere as *froward or frower*); *augers*, *bung-borers*; *bushing-tools* for brewery casks, and a *flogger*, or mallet, for springing bungs out of casks.

To make a barrel. One end is made and

tightened first. The length and girths for a barrel of required shape and capacity are known; the number of staves, their length and breadth at either end and in their centres, is known or judged by experience rather than calculated each time. What seems to require special nicety is the shaping of the sides of each stave, so that they shall fit together smoothly and uniformly, and be perfectly tight when the hoops are shrunk into place.

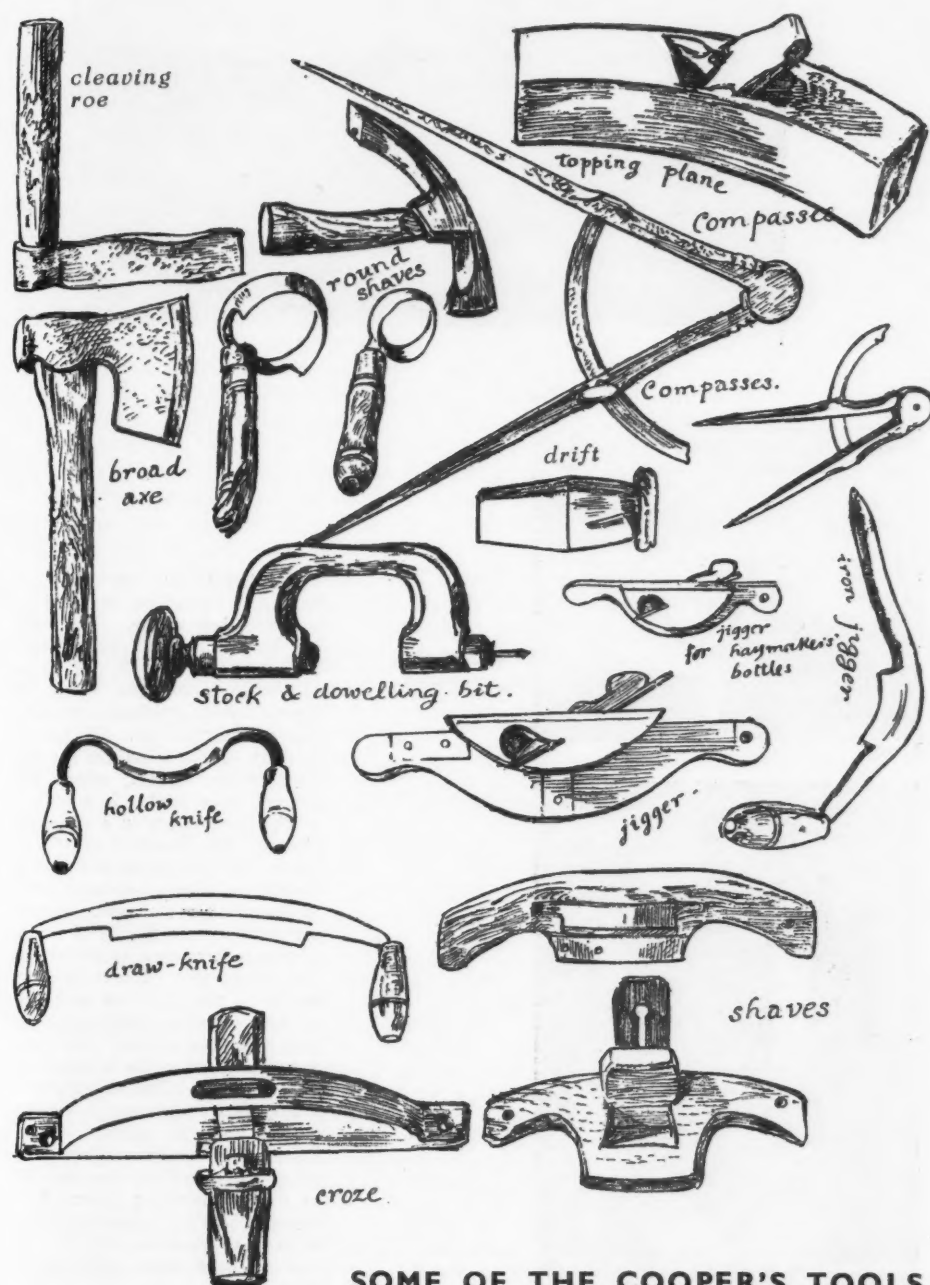
First the "truss hoop" is filled up; this hoop is a standard; it is not heated nor permanently made fast.

First one side, then the other, is drawn tightly together. When the lower part and middle are well shaped, a band is shrunk on over the outer ends, so that they are drawn more closely together. Then this is driven further up the cask, so as to pull the staves together more firmly; when this has been done as far as possible, another hoop is heated and shrunk on by quenching with damp rags. In the driving up of the hoops, two tools are used, the *drift*, or driver, and the broad axe; by these tools the hoops are driven up without injury to the wooden staves. The *croze* marks the grooves on the inside of the stave-ends, into which the bottom and top must be fitted; and the boards which compose them are rounded, bevelled and pressed in before the final hoops are shrunk on. Best Staffordshire hoop iron is used for making the bands, and as the last ones are shrunk on, some will drop off. So, though a nine-gallon cask finishes with but four hoops, six or seven may have to be put on.

The cooper who had worked silently for the first hour or two when I was making my drawing, became more inclined to talk of his work as the day wore on; and I began to learn more of the detailed subtleties of his craft than I should have observed for myself.

The greater part of the cooper's day was spent in making an oval wash-tub, such as one could use in an old-fashioned large kitchen sink. It had two longer staves for handles. The bottom was shaped from three wooden planks, which were dowelled together so that they should not possibly warp unevenly, and further, a rush, split and opened out, with its pith, was applied between the boards, so that when they were driven and cramped together the joint should be absolutely watertight. The price of this tub was sixteen shillings, which at first appeared rather expensive. But considering that it will last for a score of years, that nothing will quite take its place; and having respect to the excellent finished workmanship, this is by no means too much. It is a great pity there is so little demand for really sound and honest household gear.

Passing from small things to greater, the cooper, who had spoken of his care in ridding this tub of the ash-worms which are found in the outer parts of old cask-staves, and whose tunnels must be shaved off, or they may penetrate the wood, now told me of the "great tun of Heidelberg," which is said to be the largest in the world. A vat in a cool beer-cellar will last a hundred years; it might last two hundred, he added, and, by the way, there was a vat at Marshfield, where Woodward's Brewery used to be, which sprung open one night, and poured every drop of "four-X" ale into the little stream at the bottom of the meadows, which thereby ran nearly black and foaming, and so the brewery was ruined. The old pre-war beer left an enamel-like "crust" on the inside of the cask. The weak beer which has since been used to fill them is said to corrode this, or "eat it off"; as the proverb says, "The weak feeding on the strong." There are still three alehouses in



SOME OF THE COOPER'S TOOLS

and near Bath which malt and brew for themselves.

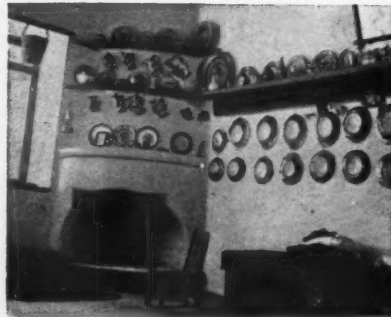
I was led to refer to Evelyn's mention of alder wood for coopering. Mr. Clapp supposed it was for dry-coopering—that is, for barrels intended for soda, and suchlike. He added that Spanish chestnut has been used, being very like oak in grain, but it will not stand repeated wetting and drying. His barrels are of oak, and very often they are small ones, or tubs made from old casks cut down, none the less sound for their long seasoning. I learned also what is meant by a "pipe," a cask, and a barrel.

In these days the demand is occasional and miscellaneous, so that the firm no longer specializes, nor manufactures standard articles in great numbers; thus there are many things to be seen, even some jobs which have no proper place here, but are such as a good craftsman may undertake when he is not over-cumbered with his special work.

"My uncle (who worked here till the spring) was very good at small things. From the time he was a boy, he used his spare time to make pill-boxes, at a penny each, and screw-boxes of Spanish mahogany."

THE MEDITERRANEAN STYLE

The following illustrations conclude the series of examples of the Mediterranean "unit" type of house to be found in the Aegean Islands. The earlier issues of the REVIEW in which other examples were published were those for March and August of this year. Photographs and notes are by Miss C. A. Harrison.



1, a church on the island of Santorin (Thera), surmounted by a typical bell tower. The walls are built of black lava and have been whitewashed. 2, the village and church on the island of Skyros photographed from the top of Kastro Hill. Of special interest in this view are the flat roofs of the houses, which are covered with sand. 3, a corner of the living-room in a house on Skyros. The interiors of all the houses on the island are almost identical in their appearance, even to the traditional copper utensils and pottery, the display of which is always arranged as shown in the photograph. The houses are similar in plan too, and each one contains a gallery bedroom, situated over the kitchen and communicating with the living-room by a staircase. The arrangement is a familiar one in many modern studios both in London and in Paris. The kitchen adjoins the living-room and can be shut off by a communicating door. 4, a house in Skyros. On the left can be seen an exterior staircase and a room, both later additions to the house.

Feudal Scotland

The village was more than half a mile long, the cottages being irregularly divided from each other by gardens, or yards, as the inhabitants called them, of different sizes, where (for it is Sixty Years since) the now universal potato was unknown, but which were stored with gigantic plants of *kale* or colewort, encircled with groves of nettles, and exhibited here and there a huge hemlock, or the national thistle, overshadowing a quarter of the petty inclosure. The broken ground on which the village was built had never been levelled; so that these inclosures presented declivities of every degree, here rising like terraces, there sinking like tan-pits. The dry-stone walls which fenced, or seemed to fence, (for they were sorely breached,) these hanging gardens of Tully-Veolan, were intersected by a narrow lane leading to the common field, where the joint labour of the villagers cultivated alternate ridges and patches of rye, oats, barley, and pease, each of such minute extent, that at a little distance the unprofitable variety of the surface resembled a tailor's book of patterns. In a few favoured instances, there appeared behind the cottages a miserable wigwam, compiled of earth, loose stones, and turf, where the wealthy might perhaps shelter a starved cow or sorely galled horse. But almost every hut was fenced in front by a huge black stack of turf on one side of the door, while on the other the family dunghill ascended in noble emulation.

About a bowshot from the end of the village appeared the inclosures, proudly denominated the Parks of Tully-Veolan, being certain square fields, surrounded and divided by stone walls five feet in height. In the centre of the exterior barrier was the upper gate of the avenue, opening under an archway, battlemented on the top, and adorned with two large, weather-beaten, mutilated masses of upright stone, which, if the tradition of the hamlet could be trusted, had once represented, at least had been once designed to represent, two rampant Bears, the supporters of the family of Bradwardine. This avenue was straight, and of moderate length, running between a double row of very ancient horse-chestnuts, planted alternately with sycamores, which rose to such a height, and flourished so luxuriantly, that their boughs completely over-arched the broad road beneath. Beyond these venerable ranks, and running parallel to them, were two high walls, of apparently the like antiquity, overgrown with ivy, honey-suckle, and other climbing plants. This avenue seemed very little trodden, and chiefly by foot-passengers; so that being very broad, and enjoying a constant shade, it was clothed with grass of a deep and rich verdure, excepting where a footpath, worn by occasional passengers, tracked with a natural sweep the way from the upper to the lower gate. This nether portal, like the former, opened in front of a wall ornamented with some rude sculpture, with battlements on the top, over which were seen, half-hidden by the trees of the avenue, the high steep roofs and narrow gables of the mansion, with lines indented into steps, and corners decorated with small turrets. One of the folding leaves of the lower gate was open, and as the sun shone full into the court behind, a long line of brilliancy was flung upon the aperture up the dark and gloomy avenue. It was one of those effects which a painter loves to represent, and mingled well with the struggling light which found its way between the boughs of the shady arch that vaulted the broad green alley.

SIR WALTER SCOTT
(*Waverley*, 1814)

MARGINALIA

PEP

In the July issue of the ARCHITECTURAL REVIEW, which was a special number dealing with the destruction of historical buildings and the problems of reconstruction after the war, reference was made (on page 40) to the research work carried out by PEP (Political and Economic Planning), and a promise given to supply details of their work in a subsequent issue. Here they are:

PEP is a non-party economic and social research organization which was formed in 1931 as a result of the com-

ing together of several small voluntary groups keenly interested in problems of industrial reorganization, the social services, public administration, and national reconstruction generally. Within a few years of its formation it had become a widely known institution, with a permanent headquarters, a small research staff, about a dozen working groups, a Club where members could meet each other informally, and a broadsheet, *Planning*, which was published every fortnight. By outbreak of war PEP had also produced a number of full-length reports on a

wide range of subjects, including the Coal, Iron and Steel, and Cotton industries, the Gas and Electricity industries, Housing England, the British Social Services, the British Health Services, Agricultural Research, the British Press, and the Location of Industry.

Inevitably the work of PEP has been seriously affected by the war, partly due to loss of personnel to Government Departments and to the Services, and partly to the difficulties of conducting social and economic investigations under war conditions. It

has been possible, however, to maintain a small research staff and to continue some group work without interruption. The broadsheet continued to be published regularly until May, 1940, when it was suspended until the end of the year. Two occasional broadsheets—one devoted to the administrative and social problems resulting from the bombing of London and the other dealing with health trends and problems in war-time—were issued early in 1941. In June the regular fortnightly publication of *Planning* was resumed and broadsheets have been issued on America and Britain, the Future of Germany, the Machinery of Government, Commodity Control Schemes, and Man-Power.

In the present world situation the principal concern of PEP is with the problems of post-war reconstruction, but these problems are approached not merely as theoretical exercises in "blue-print" planning. PEP believes that the character of the post-war world is to a considerable extent being determined here and now by actions taken in response to the exigencies of war and the social needs of the people under war conditions. The study of reconstruction must therefore be based not only on an intelligent anticipation of social needs, but also on a critical examination of war-time trends, a study of new growing points, and, above all, an examination of the adequacy of the administrative and executive machinery in Government and industry by means of which post-war reconstruction will be carried out.

PEP is at present limiting its activities to five main fields:

1. Physical Planning.

At the request of the Ministry of Works and Buildings, PEP is making an examination of—

- (i) The different forms of public land ownership and management in Great Britain, with special reference to planning functions.
- (ii) The basic social needs which should be taken into account by those who are making plans for the reconstruction of our towns and cities at the end of the war.

2. Social Security.

At the request of Mr. Arthur Greenwood's Reconstruction Secretariat, PEP has been asked to prepare a report on the reconstruction and extension of the British social security services. PEP is also making a study of the future of the British medical services.

3. Industrial Reconstruction.

PEP Industry Group is examining the problems of the transition from a war economy to a peace economy. Another group is making a study of the future organization of the building industry in view of its post-war tasks.

4. PEP International Group.

The major tasks of the PEP International Group are to produce an analysis of the strategic factors in the present world situation, to make an attempt to assess the long-term significance of some of the main developments which are taking place during the war, and to indicate the steps which should be taken during the war to lay the foundations of a constructive peace settlement.

B L I C K L I N G H A L L , N O R F O L K



Blickling Hall was designed about 1620 by Robert Lyminge for Sir Henry Hobart, on the site of a house belonging to the Boleyn family of which only part of the moat remains. The chief later alterations were designed about the middle of the eighteenth century by William Ivory. The famous gardens were greatly beautified by the XIth Marquess of Lothian who inspired the Country Houses scheme and in 1940 bequeathed the whole estate and almost the whole of the contents of the Hall to the Trust. The estate of 4,526 acres, including the deer park, 17 farms, an inn and 138 smaller houses and cottages, is held not only as endowment for the Hall, but for its beauty and the interest of some of the farms and other houses.

5. Machinery of Government.

The PEP group on the Machinery of Government has already produced a report which is being published in broadsheet form on the British Civil Service. This work is to be followed up by a further study of the relations between Parliament and Cabinet and the Civil Service.

During the next few months most PEP Groups hope to produce interim reports which will be published in broadsheet form. The broadsheet is obtainable only by subscription—£1 per annum—on application to the Acting Secretary, Political and Economic Planning, 16, Queen Anne's Gate, S.W.1.

The National Trust

The Annual Report of the National Trust for Places of Historic Interest or Natural Beauty, which was recently published, naturally records some diminution of activities. The raising of special funds for the preservation of properties is impractical in these days, but considerable new properties have nevertheless been acquired through bequests; in fact, the past year produced a record increase: 9,644 acres of property acquired and a further 557 acres protected under covenants. The properties owned or protected by the Trust will by the end of 1941 extend to over 100,000 acres as compared with 50,000 acres only six years ago.

New acquisitions include the 2,000-acre Dolancottry Estate in Carmarthen-shire and 346 acres of Edale in Derbyshire, but by far the most important is Blickling Hall, Norfolk, with its Estate of 4,526 acres, bequeathed to the

Trust by the late Lord Lothian. This is the first of the greater English country houses to be actually handed over with all its furnishings, gardens and estate, but other owners of historic houses are said to be making similar provisions. The Report quotes the following excerpt from Lord Lothian's codicil disposing of Blickling Hall as perfectly expressing the purpose of their Country Houses Scheme:

"I now hereby devise and bequeath the whole of my Blickling Estates in Norfolk, known as Blickling Hall Estate and the contents of the house (other than the portraits of the Seventh and Eighth Marquesses of Lothian if my successor in the Title and Honours of Lothian wishes to remove them to one of his own houses and the linen, crockery and plate which may also pass to him) to the said National Trust, and I do so in the confident expectation that in accordance with their publicly expressed intention of respecting the wishes of testators who leave their property to them, they will (a) use the whole surplus revenue from the estate and woodlands, after maintenance of the former, to maintain Blickling Hall and its contents, the gardens and the park in as perfect a condition as possible as a period estate and Hall, to modernize its conveniences and redecorate and refurnish it from time to time in accordance with the best artistic advice and to keep an adequate staff of gardeners, housemaids, and so on to maintain it in clean and beautiful condition, (b) they will, subject to some regular access to it by the public, let it as a family residence to persons who will love, appreciate and respect Blickling Hall and will use it not only as a private residence but as a place from which public or intellectual or artistic activities go forth and in which persons or conferences of persons interested in such things are entertained and who have the means necessary to enable them to live at Blickling and use it for such purposes and (c) they will offer the right

to live at Blickling to the following persons in order—first to my successor in the Title and Honours of Lothian provided he has the means to live there and is actively interested in public and artistic activities as set forth in (b) above, and in the event of his not being able to or wanting to do so secondly to . . ."

The late Lord Lothian, who died early this year while serving as His Majesty's ambassador in Washington, had recently become one of the National Trust's vice-presidents.

Meikle versus Maufe

In the Chancery Division on Thursday, July 31, Mr. Justice Uthwatt delivered his reserved judgment in the action by Mr. Joseph A. Meikle, F.R.I.B.A., Mrs. Clara Ellen Smith, a widow, and Mr. Frank W. Chaplin, against Mr. Edward Maufe, A.R.A., F.R.I.B.A., Buxted, Sussex, and Heal and Son, Ltd., house furnishers of Tottenham Court Road, London, for damages for infringement of copyright in architectural work.

Mr. Meikle's claim was in his personal capacity, and the plaintiffs Mrs. Smith and Mr. Chaplin's claim were in the alternative as executors of Arnold W. Smith, deceased, for damages for infringement of copyright in architectural drawings and plans made by Cecil C. Brewer and

Smith for the building occupied by Heal and Son, Ltd., in the Tottenham Court Road, and in the building as an architectural work.

The case for the plaintiffs was that the plans and drawings of the northern part of the building were the work of Smith and Brewer, and that they had a beneficial interest in the copyright. Later Heal and Son, Ltd., decided to extend their building by an addition on the south of the existing building, and they decided to have Mr. Maufe as their architect. Plaintiffs' complaint was that Mr. Maufe had carried out the extension by copying plaintiffs' work.

Mr. Maufe denied infringement of plaintiffs' copyright, and pleaded that the façade had to be the same in order to have uniformity in the extension of the building. The details, however, were entirely different. It was also pleaded in regard to the façade that there was an implication for the continuity of the building in keeping with the part already erected.

Mr. C. Harman, K.C., and Mr. J. Mould appeared for the plaintiffs, and Mr. Shelley, K.C., and Mr. Guy Aldous represented the defendants.

The hearing of the case occupied the Court for nine days,

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Finally, and then only because it has become old fashioned in design, it is scrapped . . . after thirty, forty, fifty years of service. But the Teak of which that coach was built has neither snapped, cracked, warped nor split. It is as good as on the day it was put in. TEAK can TAKE IT.

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and there were over one thousand exhibits in the case, including plans, drawings, and photographs.

JUDGMENT

His lordship, in giving judgment, said the case was one in which he had to deal with the facts of the case and the law with regard to copyright in architectural designs. As to the nature of the alleged infringements he would have to deal with them in some detail. Mr. Shelley, for the defendants, had said that the case depended upon details, and those details had been gone into very carefully. The firm of Smith and Brewer were originally engaged by Messrs. Heal and Son to act as architects in connection with the building they proposed to erect in the Tottenham Court Road. No special terms were arranged between the parties. They were appointed architects by Heal and Son, and the matter was left at that. The defendants had admitted that Smith and Brewer designed the northern part of the building. With regard to those plans his lordship found that they were the joint work of Smith and Brewer, made in the ordinary course of their partnership business. It was the original work of the partners working together. Subject to the point of law raised, the copyright was in their name, they having collaborated in the work, and they were well fitted for the combination. The

result of their work was a novel building of an artistic character being erected in the Tottenham Court Road. The design was one which could be copied and reproduced in any extension of the building. In his lordship's view, Smith and Brewer were alone responsible for the work. It was not disputed that if a copyright existed, some benefit in that copyright was vested in the plaintiff, he owning a legal and equitable interest in the copyright.

When Messrs. Heal decided to extend their building they engaged Mr. Maufe to carry out the extension, and he made a continuity with minor differences. His object was to make the new addition look like the old, and he succeeded. The result was the present new portion. There were certain changes in the design.

With regard to the interior his lordship could not go into all the details, but there was a reproduction here and there which was a breach of the copyright.

The defendants had sought to justify their action on the ground that it was agreed between Smith and Brewer, or impliedly agreed, that the building could be reproduced in a manner to constitute one architectural building. He accepted the evidence of Sir Ambrose Heal that before the new building was erected he discussed the question of the extension with Mr. Meikle. There had been a breach here by the defendants, and the question was now

one of damages for general infringement of plaintiffs' copyright. He assessed the sum at £150.

Mr. Shelley said his clients had paid into Court a sum in excess of the £150 his lordship had awarded plaintiffs.

Mr. Mould said the question of costs would have to be argued.

His lordship under the Copyright Act should have complete discretion as to costs.

After discussion his lordship adjourned the question of costs for legal argument at a date in October next.

A National Building Council

The Minister of Works, in pursuance of the policy of co-ordinating the war-time building effort of the country, has decided to establish a National Building Council representative of the principal interests of the industry.

The names of the members of the council will be made public shortly. The official chairman will be Mr. Hugh Beaver, M.Inst.C.E., M.I.Chem.E., Director-General of the Ministry of Works and Buildings. Sir Ernest Simon, now Chief Regional Information Officer for the North West Region, will be deputy chairman.

Registration of Builders

Every builder or civil engineering contractor in the country had to register by September 1; otherwise he is not to be permitted to carry on his

business after October 1. That is the effect of a new Regulation issued during August last by the Ministry of Works and Buildings.

The Regulation did not apply to employees. It did apply to all undertakings in both industries. In the building industry it included general building, plumbing and glazing, painting, paperhanging and decorating, joinery and carpentry, plastering, slating and tiling, etc. It also included public works contracting, constructional engineering, installation of heating, ventilating and electrical equipment in buildings, and so on. All local authorities and public utility undertakings which have building or civil engineering departments or branches had to register, but private firms, not themselves building or civil engineering undertakings, were not asked to register in respect of a building maintenance branch unless the branch worked for persons outside the main firm.

Certificates of registration are to be issued as soon as possible and anyone carrying on business after October 1 in building or civil engineering without holding a certificate is liable, on conviction, to fine, imprisonment, or both.

It is not known to within many thousands how many builders there are. One estimate puts it at 80,000.

The registration is an important step in the plan of Lord Reith, Minister of Works, to organize these industries for maximum war effort.



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A New Director of Works

The Minister of Works has appointed Mr. T. P. Bennett, F.R.I.B.A., to be Director of Works in succession to the late Lt.-Col. C. L. Howard Humphreys. Mr. Bennett was formerly Director of Bricks, subsequently Deputy Director of Works. He is the founder of the firm of T. P. Bennett and Son, architects, of London, was at one time the Director of the Northern Polytechnic School of Architecture, and has carried out important work for the Admiralty.

Correspondence



The Editor,

THE ARCHITECTURAL REVIEW

SIR,

Please allow me to submit two *marginalia* to Mr. Pevsner's paper in your August issue on Roger Fry and the Omega Workshops. Should he not on the strength of "Durbins" (and the Kodak Building too) revise his statement, p. 29 of his book, on the Pioneers of the Modern Movement: "England's activity in the preparation of the Modern Movement came to an end less than ten years after Morris's death"—i.e., about 1905. Surely "Durbins" is as advanced in style as anything you could find about 1910 anywhere in Europe.

And secondly: Can French inspiration for the Omega experiment in creative team work be as sweepingly denied as Mr. Pevsner does? I wonder if he happens to have come across Jules Romain's *Unanimisme* and *L'Abbaye*, the small and short-

lived group of young writers who about 1907 *segg.* gathered round Jules Romain? The doctrine of the group was a glorification of anonymity as against individualism. Amongst its members—this is what makes a connection with Roger Fry so prob-

able—were P. J. Jouve, whose poetry Fry translated, and Charles Vildrac, one of the closest of Fry's French friends.

Yours etc.,

PETER F. R. BONNER

London

The Buildings Illustrated

Church at Hook, Hampshire.

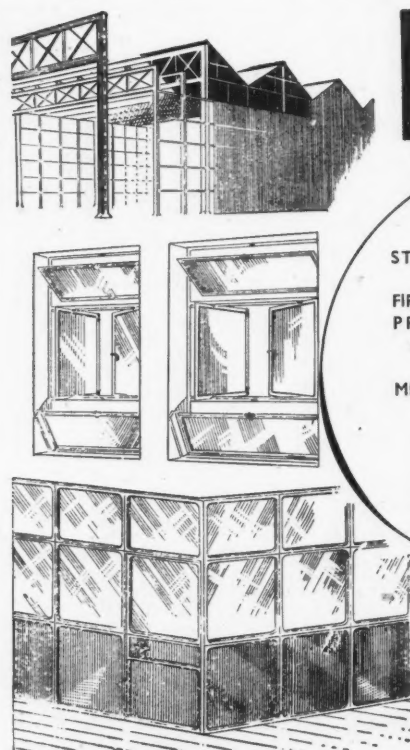
Architect: Edward Maufe.

The general contractors were Musselwhite and Son. Among the sub-contractors and suppliers were the following: Daneshill Brick and Tile Co. (bricks), Stoner and Saunders Ltd. (cast lead fascia), Chas. Arnold (Isleworth) Ltd. (slating), Wainwright and Waring Ltd. (windows and glazing), Hollis Bros. and Co. Ltd. (wood-block flooring), Eric Munday (foundation stone and lettering), J. W. Gray and Son Ltd. (lightning conductor), Barlow and Young Ltd. (electric wiring), Tucker and Edgar (electric light fixtures), Mears and Stainbank (bells), Haywards Ltd. (iron staircases), Fenning and Co. Ltd. (travertine paving), Mealing Bros. Ltd. (chairs), Heal and Son Ltd. (altar hangings and frontals), Charles Farris Ltd. (alms boxes), J. Starkie Gardner Ltd. (flag mast), Ariel Chase (central heating), James Gibbons Ltd. (door furniture).

Paint Factory, Newcastle-upon-Tyne.

Architects: T. A. Page, Son and Bradbury.

The general contractors were Gordon Durham and Co. Ltd. Among the sub-contractors and suppliers were the following: Limmer and Trinidad Lake Asphalt Co. Ltd. (asphalt), London Brick Co. Ltd. (bricks), Artificial Stone Co. Ltd. (artificial stone), Rowells (1924) Ltd. (central heating), Thomas Sloan Ltd. (electric wiring), Allinson and Sons (plumbing), Adamsez Ltd. (sanitary fittings), Rustproof Metal Windows Ltd. (casements), Haywards Ltd. (rolling shutters), Mather and Platt Ltd. (fireproof doors), J. T. Leake Ltd. (iron staircases), R. W. Sanderson and Sons (plaster), William Wadsworth and Sons Ltd. (lifts), Smith's Electric Clocks Ltd. (clocks).



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